ENVR8304D / ENVR8304E

ENVR8304D-8CH / ENVR8304E-8CH, Plug & Play NVR

User's Manual

EverFocus®

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EVERFOCUS ELECTRONICS CORPORATION

ENVR8304D-8CH / ENVR8304E-8CH

User's Manual

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Release Date: May, 2014

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Safety Precautions

- Refer all work related to the installation of this product to qualified service personnel or system installers.

- Do not block the ventilation openings or slots on the cover.

- Do not drop metallic parts through slots. This could permanently damage the appliance. Turn the power off immediately and contact qualified service personnel for service.

- Do not attempt to disassemble the appliance. To prevent electric shock, do not remove screws or covers. There are no user-serviceable parts inside. Contact qualified service personnel for maintenance. Handle the appliance with care. Do not strike or shake, as this may damage the appliance.

- Do not expose the appliance to water or moisture, nor try to operate it in wet areas. Do take immediate action if the appliance becomes wet. Turn the power off and refer servicing to qualified service personnel. Moisture may damage the appliance and also may cause electric shock.

- Do not use strong or abrasive detergents when cleaning the appliance body. Use a dry cloth to clean the appliance when it is dirty. When the dirt is hard to remove, use a mild detergent and wipe gently.

- Do not overload outlets and extension cords as this may result in a risk of fire or electric shock.

- Do not operate the appliance beyond its specified temperature, humidity or power source ratings. Do not use the appliance in an extreme environment where high temperature or high humidity exists. Use the NVR at temperatures within 0°C~40°C / 32°F~104°F (Storage). The input power source is 100-240 VAC~ / 150W max.

- **Read Instructions**
  All the safety and operating instructions should be read before the unit is operated.

- **Retain Instructions**
  The safety and operating instructions should be retained for future reference.

- **Heed Warnings**
  All warnings on the unit and in the operating instructions should be adhered to.

- **Follow Instructions**
  All operating and use instructions should be followed.

- **Cleaning**
  Unplug the unit from the outlet before cleaning. Do not use liquid cleaners, abrasive or aerosol cleaners. Use a damp cloth for cleaning

- **Attachments**
  Do not use attachments not recommended by the product manufacturer as they may cause hazards.

- **Water and Moisture**
  Do not use this unit near water-for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, near a swimming pool, in an unprotected outdoor installation, or any area which is classified as a wet location.

- **Servicing**
  Do not attempt to service this unit by yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

- **Power Cord Protection**
  Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, playing particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.

- **Object and Liquid Entry**
  Never push objects of any kind into this unit through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the unit.

- **Battery**
  Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.
  a. Use only two AAA dry cell batteries.
  b. Do not dispose of the batteries in a fire as it may explode.

CE

ATTENTION! This is a class A product which may cause radio interference in a domestic environment; in this case, the user may be urged to take adequate measures.

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the users' authority to operate this equipment.

This Product is RoHS compliant.

WEEE

Your EverFocus product is designed and manufactured with high quality materials and components which can be recycled and reused. This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from your household waste. Please, dispose of this equipment at your local community waste collection/recycling centre. In the European Union there are separate collection systems for used electrical and electronic product.
Please, help us to conserve the environment we live in!

This product complies with the High-Definition Multimedia Interface (HDMI) Specification Adopter Agreement.

The information in this manual was current upon publication. The manufacturer reserves the right to revise and improve his products. Therefore, all specifications are subject to change without prior notice. Manufacturer is not responsible for misprints or typographical errors.
Please read this manual carefully before installing and using this unit. Be sure to keep it handy for later reference.

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Chapter

1

1. Introduction

EverFocus all new NVR Solution, targeting small-scale installations such as homes and small businesses, will also be placed under the spotlight. With true plug-and-play setup and real-time local display up to Full HD resolution, the Linux-embedded solution works just like a NVR but without the need for those complicated network settings that would be otherwise required with conventional NVR systems.

Featuring a standalone network video recorder up to 8 channels, along with a series of NVR EverFocus megapixel cameras, the NVR Solution offers a complete system kit that can be easily installed in a matter of minutes. There is no need to purchase extra computers or software to operate the system.

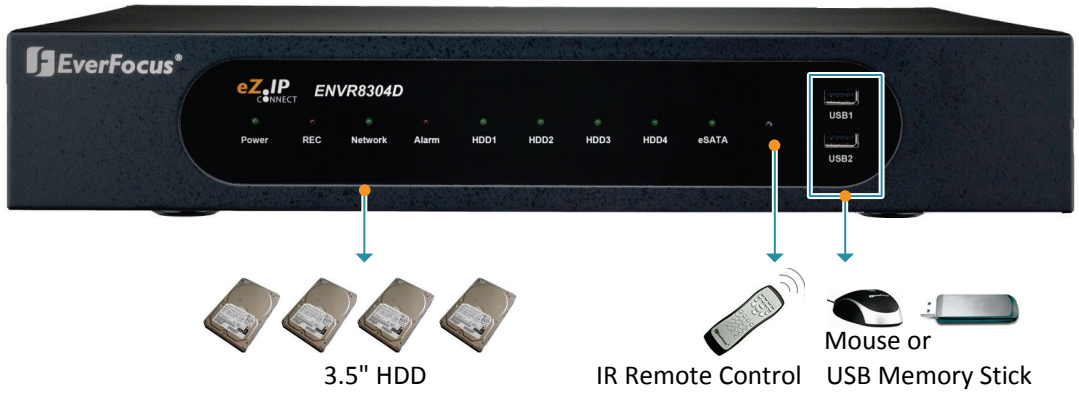
When paired with our powerful EverFocus PowerVideo Plus CMS, the ENVR8304D-8CH / ENVR8304E-8CH can be used in complex multi-site installations with centralized management. The ENVR8304E-8CH is also fully supported by the EverFocus MobileFocus remote viewer on iOS and Android devices, which help extend video surveillance from fixed locations to mobile environments.

EverFocus also introduces an innovative function, **eZ Hopper**, for our new series of DVRs / NVRs, allowing users to control up to 16 connected DVRs / NVRs with just one single mouse. This breakthrough feature brings great benefits to the traditional small and medium-sized surveillance system, not only eliminating the expense of the central monitoring software, but also saving the setup cost and time.

1.1 Overview

ENVR8304D:

Front View



Rear View

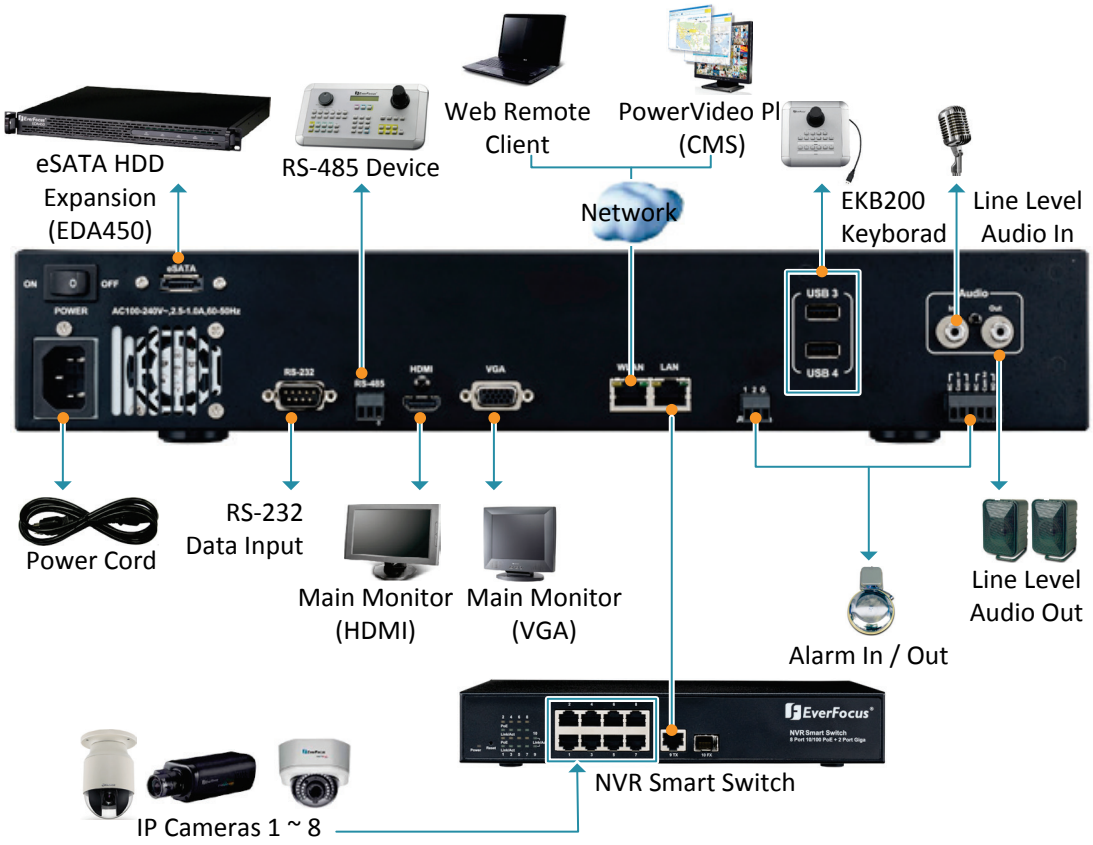
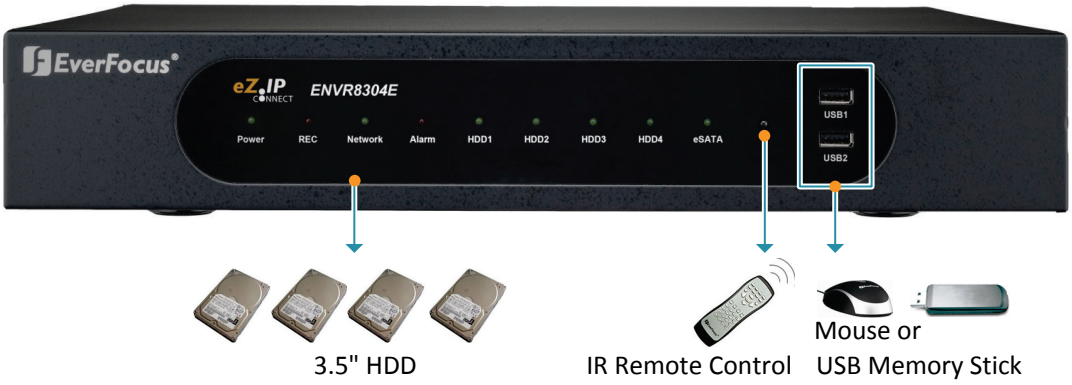


Figure 1-1

ENVR8304E:

Front View



Rear View

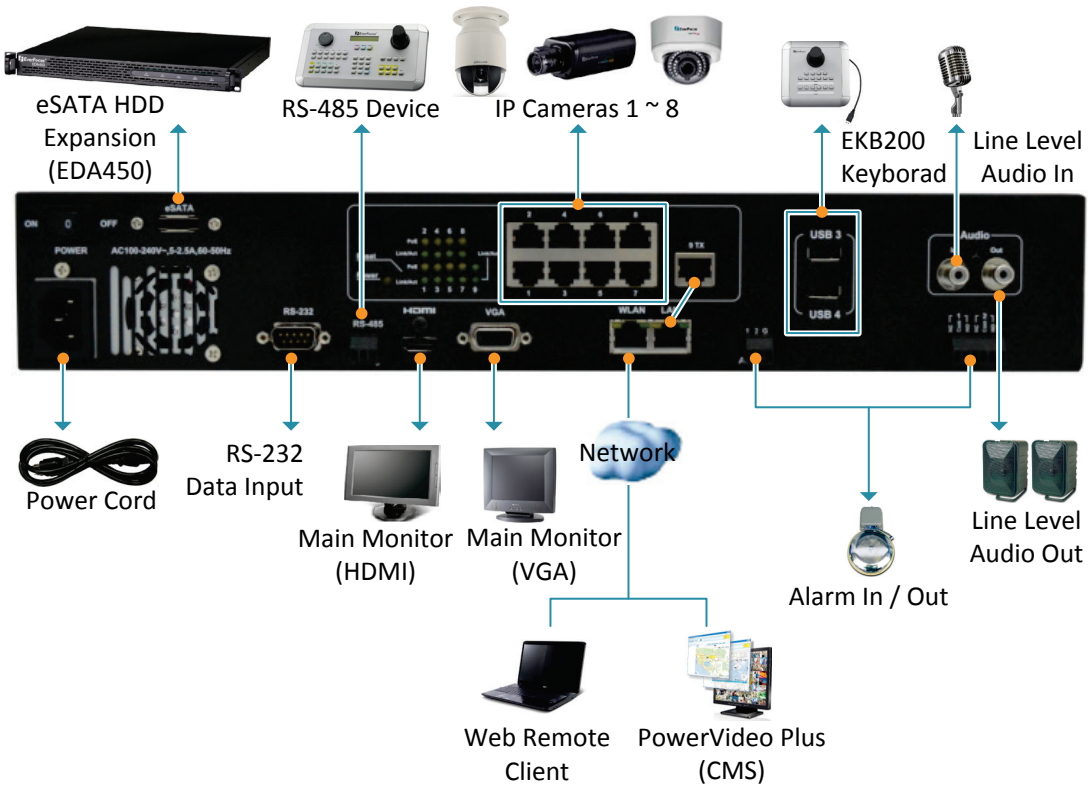
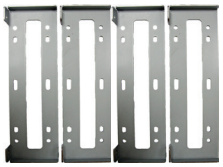


Figure 1-2

1.2 Features

- 8-channel real-time recording and playback at 1080p resolution
- Build-in 8 PoE ports (ENVR8304E only)
- Support megapixel IP cameras
- The Plug and Play design simplifies installation and configuration
- H.264 compression format for enhancing recording capacity and improving network image transmission speed
- eZ Hopper: Only one mouse to control up to 16 connected EverFocus DVRs/NVRs
- Separately configured HDMI or VGA (1080p) monitor outputs
- High bandwidth 1080p recording (200 / 240fps) with recordable reduced bandwidth stream for mobile or multiplexed viewing applications
- RAID5 – for full data protection
- Free EverFocus DDNS Service – static IP address is not required for reliable remote access
- Supports one eSATA port for external HDD (optional:EDA450)
- Supports live monitoring and playback of video from mobile devices via MobileFocus / MobileFocus Plus Apps
- Multiple control inputs: mouse / remote controller / EKB500 and EKB200 keyboards
- Multiple intelligent video query functionality, including snapshot and smart search
- Powerful archive functionality from both remote and NVR sites
- Simplified access to common features such as setup, archival, playback and search functions through express menus
- Remote configuration support from built-in web interface
- Gigabit Ethernet interface for remote network viewing and control
- Integration with PowerVideo Plus
- Multi-language support
- 19” Rack mountable – rack ears included

1.3 Packing List

• NVR x 1	• User Manual x 1
• CD x 1 (Please see Note 3.) 	• Mouse x 1
• Power Cord x 1 	• SATA Cable x 4
• HDD Bracket x 4 	• Rack Ear x 2
• IR Remote Control x 1 	• AAA Battery x 2 (Please see Note 4.)
• Sliver Screw x 16, Washer Head Screw x 8, M3 (ϕ6.8) Screw x 4 	• Only for **ENVR8304E**: RJ45 CAT5 Cable x1 (Please see Note 5.)
• Only for **ENVR8304D**: NVR Smart Switch x 1, Power Cord x 1, CD x 1 (Please see Note 6.) 	

Note:

1. Equipment configurations and supplied accessories vary by country. Please consult your local EverFocus office or agents for more information. Please also keep the shipping carton for possible future use.
2. Contact the shipper if any items appear to have been damaged in the shipping process.
3. The CD contains the IP Utility software, User Manual and Quick Installation Guide.
4. Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

a. Use only two AAA dry cell batteries.

b. Do not dispose of the batteries in a fire as it may explode.

5. Be sure to use this cable to connect the LAN port to the Uplink port (9TX) of the NVR, please see *2.3 Basic Connection.*
6. These three items are packed in a box, and the CD contains the User Manual of the NVR Smart Switch.

1.4 Optional Accessories

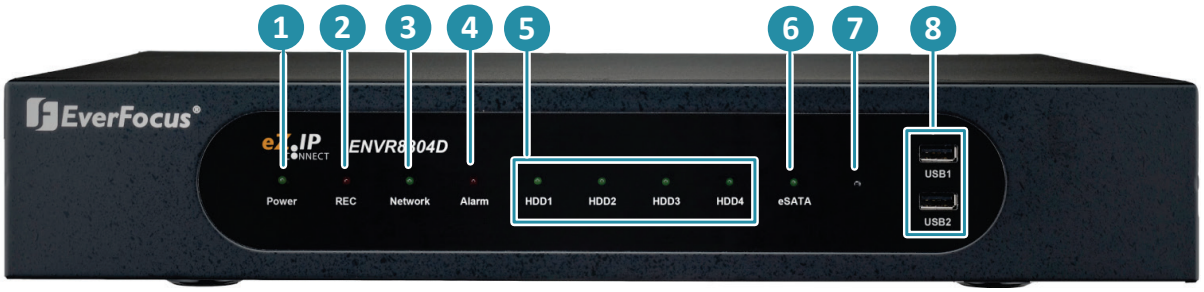
- EKB200 (USB controller keyboard: connect to the PC or the NVR to control the PTZ cameras connected to the NVR). Please refer to *6.8.6 EKB200 Setting* and the *User Manual* of the *EKB200 Keyboard*.

- EKB500 (RS-485 keyboard: connect to the RS-485 port to control the PTZ cameras connected to the NVR). Please refer to *6.1 Camera* and the *User Manual* of the *EKB500 Keyboard*.

- EDA450 (eSATA Storage Device: connect to the eSATA port of the NVR). Please refer to No. 2, Figure 1-3.

1.5 Front Panel

ENVR8304D:



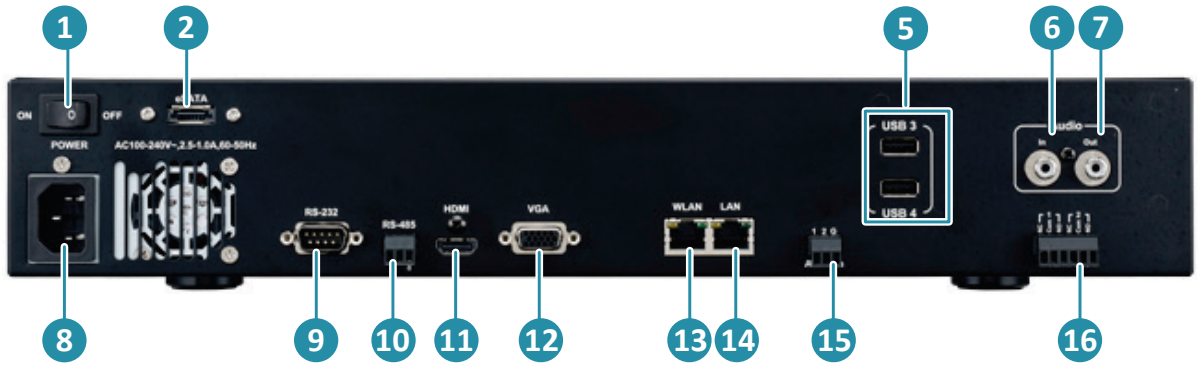
ENVR8304E:

Figure 1-2

No.	Name	Description
1	**Power**	Indicates the power is on.
2	**REC**	Indicates the NVR is recording.
3	**LAN**	Indicates the NVR is connected to the network.
4	**Alarm**	Indicates an alarm input is triggered.
5	**HDD1~4**	Separately indicates the internal HDD 1~4 is activating.
6	**eSATA**	Indicates the external HDD is activating.
7	**IR Receiver**	Receiver for signals from the IR remote control.
8	**USB1 / USB2**	USB2.0 ports for connecting to a mouse, external storage device, or EKB200 keyboard.

1.6 Rear Panel

ENVR8304D:



ENVR8304E:

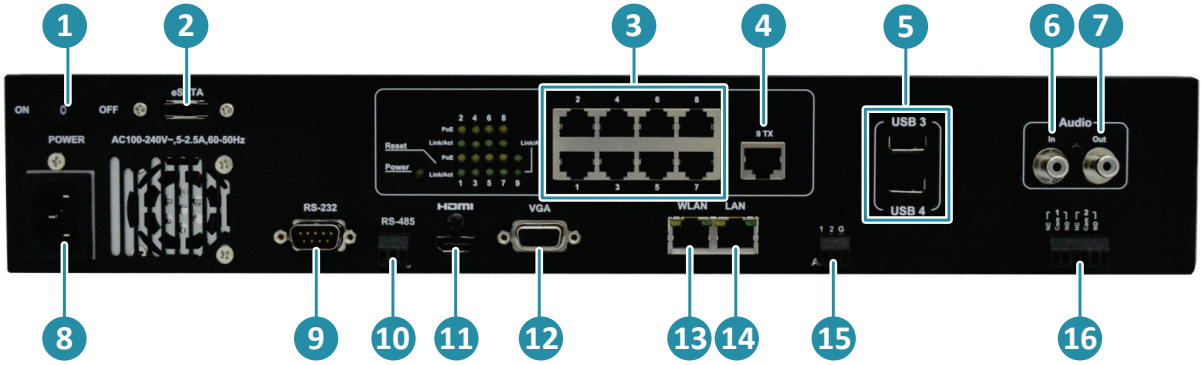


Figure 1-3

No.	Name	Description
1	**Power**	Press to turn On / Off the NVR.
2	**eSATA Port**	Connects to an external eSATA storage device. (EDA450)
3	**PoE Port 1~8**	Connects to 8 IP cameras without extra power supply.
4	**Uplink Port**	Connects to the LAN port of the NVR using the supplied RJ-45 Cable.
5	**USB3 / USB4**	The USB2.0 ports for connecting to a mouse, external storage device or EKB200 keyboard.
6	**Audio Input (RCA socket)**	Connects to the audio input devices, such as microphones. Note that the microphone with a (built-in) amplifier and external power supply are required.
7	**Audio Output (RCA socket)**	Connects to the audio output devices, such as speakers. Note that the speaker with a (built-in) amplifier and external power supply are required.
8	**Power Port**	Connects to the 100-240 VAC~ power using the supplied Power Cord.
9	**RS-232 Port**	Connects to the RS-232 device. Please refer to *2.3.7 RS-232 Port*.

10	**RS-485 Port**	Connects to the RS-485 device, such as EverFocus' EKB-500 keyboard. Please refer to *2.3.6 RS-485 Port*.
11	**HDMI Port**	Connects to the Main monitor using a HDMI cable. Please refer to *2.3.3 Monitor Connection*.
12	**VGA Port**	Connects to the Main monitor using a VGA cable. Please refer to *2.3.3 Monitor Connection*.
13	**WLAN**	Connects to the network using a standard RJ-45 CAT5 10/100Mb Ethernet cable. Please refer to *2.5 Connecting the NVR to the Network.*
14	**LAN**	**ENVR8304D**: Connects to the Uplink Port of a PoE device using a standard RJ-45 CAT5 10/100Mb Ethernet cable. Please refer to *2.3.1 Camera Connection*. **ENVR8304E**: Connects to the **(4) Uplink Port** using the supplied RJ-45 Cable. Please refer to *2.3.1 Camera Connection*.
15	**Alarm Input**	Connects up to 2 alarm inputs. Please refer to *2.3.5 Alarm IO*.
16	**Alarm Output**	Connects to 2 alarm output devices. Please refer to *2.3.5 Alarm IO*.

Chapter 2

2. Installation

2.1 Hard Disk Drive Installation

1. Make sure the NVR is power-off.
2. Unscrew the ten housing screws on the NVR, and open the housing.

Figure 2-1

3. Screw two HDD brackets on both sides of the HDDs using the Sliver Screws.

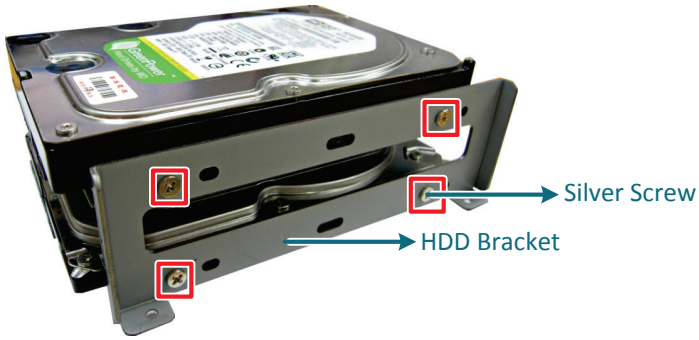


Figure 2-2

4. Use the SATA Cable, and connect one end to the SATA port on the small PCB inside the NVR, and the other end to the SATA port on the HDD.

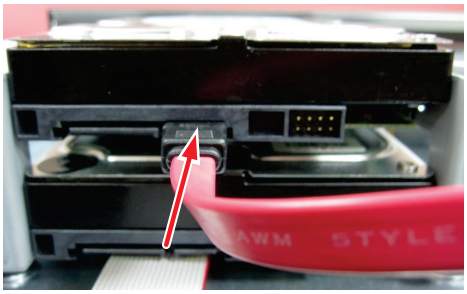


Figure 2-3

5. Connect the internal power cable to the HDD.

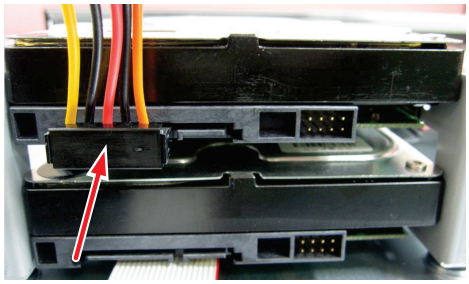
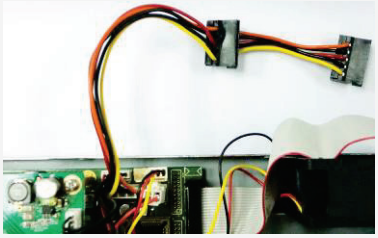


Figure 2-4

Note: The internal power cable is connected to the Main board inside the NVR. The power cable features two connectors, which can be used to connect to two HDDs.



6. Screw the HDDs with the brackets inside the NVR using the Washer Head Screws.

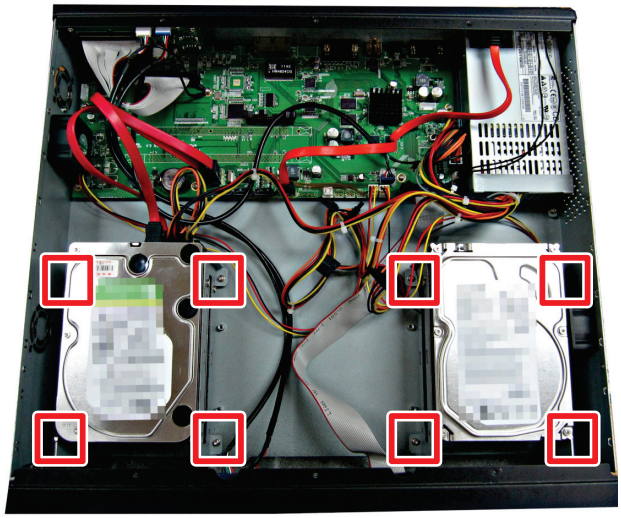


Figure 2-5

7. Screw back the housing to the NVR.

2.1.1 Hard Disk Compatibility List

Please use the hard disk models recommended in the list below to ensure your hard disks will be compatible.

SATA Hard Disk	Model	Capacity
Seagate	Constellation ES.3 SATA3 ST4000NM0033	4TB
	Constellation CS SED SATA3 T3000NC000	3TB
	CE-Video SATA3 / ST3500312CS	500GB
	CE-Video SATA3 / ST1000VM002	1TB
	CE-Video SATA3 / ST2000VM003	2TB
	CE-Video SATA3 / ST3000VM002	3TB
	CE-Video SATA3 / ST4000VM000	4TB
	ST4000VX000	4TB
	SV35 SATA6 7200/ ST1000VX000	1TB
	SV35 SATA6 7200/ ST2000VX000	2TB
	SV35 SATA6 7200/ ST3000VX000	3TB
	Constellation CS SATA3 7200 / ST1000NC000	1TB
	Constellation CS SATA3 7200 / ST3000NC000	3TB
	CE-Video SATA6 5900RPM / ST1000VM002	1TB
	CE-Video SATA6 5900RPM / ST2000VM003	2TB
	SV35 SATA3 7200/ST3000VX000	3TB
	SV35 SATA3 7200/ST2000VX000	2TB
	SV35 SATA3 7200/ST1000VX000	1TB
	CE-Video SATA3 / ST2000VM003	2TB
	CE-Video SATA3 / ST1000VM002	1TB
Western Digital	WD40PURX-64GVNYO	4TB
	WD30PURX-64P6ZY0	3TB
	WD20PURX-64P6ZY0	2TB
	WD10PURX-64D85Y0	1TB
	WD10EURX SATA3	1TB
	WD30EURS SATA2	3TB
	WD10EVVS SATA	1TB
	WD20EFRX	2TB
	WD30EFRX	3TB
	WD4001FAEX	4TB
	WD RE SATA/64MB Cache WD4000FYYZ	4TB

Note: If using two or more hard disks, please choose the hard disks with the same capacity.

2.2 Rack Mount

To install rack ears on the NVR, use the supplied two Rack Ears and the four M3 (ϕ6.8) Screws for rack mount installation on both side.

Figure 2-6

2.3 Basic Connection

The instructions below describe the basic connection for ENVR8304D-8CH and ENVR8304E-8CH.

ENVR8304D:

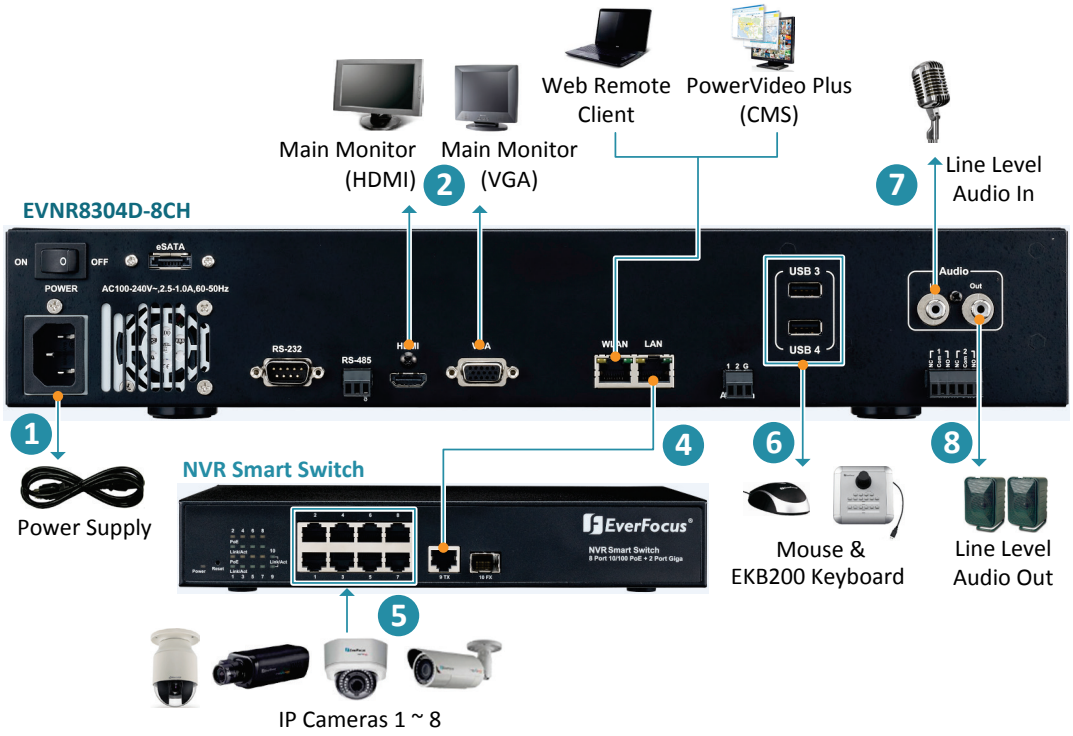


Figure 2-7

1. Using the supplied Power Cord, connect one end to the 100-240 VAC~ port on the NVR and the other end to the 100-240 VAC~ power outlet.
2. To view videos, connect a monitor to the HDMI or VGA port using the HDMI or VGA cable supplied by the monitor manufacturer.
3. To manage the NVR over network, use a standard RJ-45 CAT5 10/100Mb Ethernet cable to connect the WLAN port of the NVR to the network. Please refer to *2.5 Connecting the NVR to the Network*.
4. Connect the LAN port of the NVR to the Uplink port of a PoE device using a standard RJ-45 CAT5 10/100Mb Ethernet cable. Please see *2.3.1 Camera Connection* for more details.
5. Connect the IP cameras to the 1~8 camera ports at the rear of the PoE switch using Ethernet cables without separate power sources. Please see *2.3.1 Camera Connection* for more details.
6. Optionally connect a mouse or a keyboard (EKB200) to the NVR to control the system. You can also control the system using the supplied IR Remote Controller.
7. Connect a microphone to the Audio-in RCA socket of the NVR. Note that the microphone with a (built-in) amplifier and external power supply is required.
8. To listen to audio of video source, connect a speaker to the Audio-out RCA socket. Note that the speaker with a (built-in) amplifier and external power is required.

ENVR8304E:

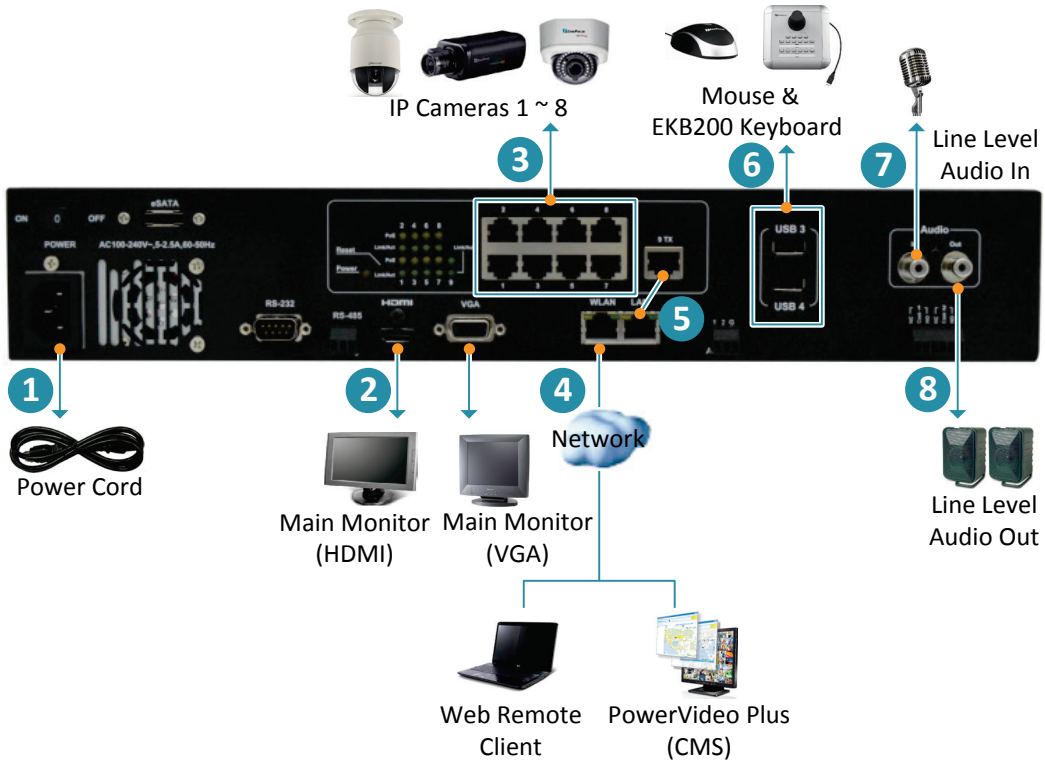


Figure 2-8

1. Using the supplied Power Cord, connect one end to the 100-240 VAC~ port on the NVR and the other end to the 100-240 VAC~ power outlet.
2. To view videos, connect a monitor to the HDMI or VGA port using the HDMI or VGA cable supplied by the monitor manufacturer.
3. Connect the IP cameras to the 1~8 camera ports using RJ-45 CAT5 10/100Mb Ethernet cables without separate power sources. Please see 2.3.1 Camera Connection for more details.
4. To manage the NVR over network, use a standard RJ-45 CAT5 10/100/1000Mb Ethernet cable to connect the WLAN port of the NVR to the network. Please refer to 2.5 Connecting the NVR to the Network.
5. Connect the LAN port of the NVR to the Uplink port (9TX) using the supplied RJ-45 CAT5 10/100/1000Mb Ethernet cable. Please see 2.3.1 Camera Connection for more details.
6. Optionally connect a mouse or a keyboard (EKB200) to the NVR to control the system. You can also control the system using the supplied IR Remote Controller.
7. Connect a microphone to the Audio-in RCA socket of the NVR. Note that the microphone with a (built-in) amplifier and external power supply is required.
8. To listen to audio of video source, connect a speaker to the Audio-out RCA socket. Note that the speaker with a (built-in) amplifier and external power is required.

2.3.1 Camera Connection

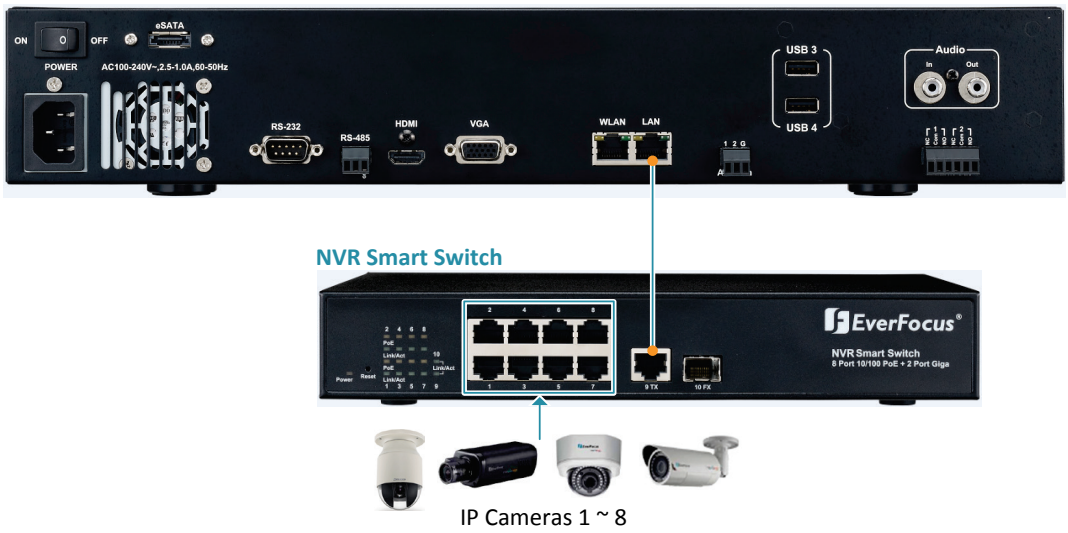
ENVR8304D: Connect the LAN Port to the Uplink port of the PoE device (NVR Smart Switch) using the supplied RJ-45 Cable. Connect the IP cameras to the 1~8 camera ports to the PoE port 1~8 using Ethernet cables.

ENVR8304E: Connect the LAN Port to the Uplink port of the NVR using the supplied RJ-45 Cable. Connect the IP cameras to the 1~8 camera ports to the PoE port 1~8 using Ethernet cables

Note:

1. If the length between the PoE switch and the IP camera exceeds 100 meters, please see *2.3.2 Cable Length Extension* for cable length extension instruction.
2. The total PoE power budget is **130W**; please make sure the total Power Consumption of all the connected IP cameras doesn't exceed 130W.

ENVR8304D:



ENVR8304E:

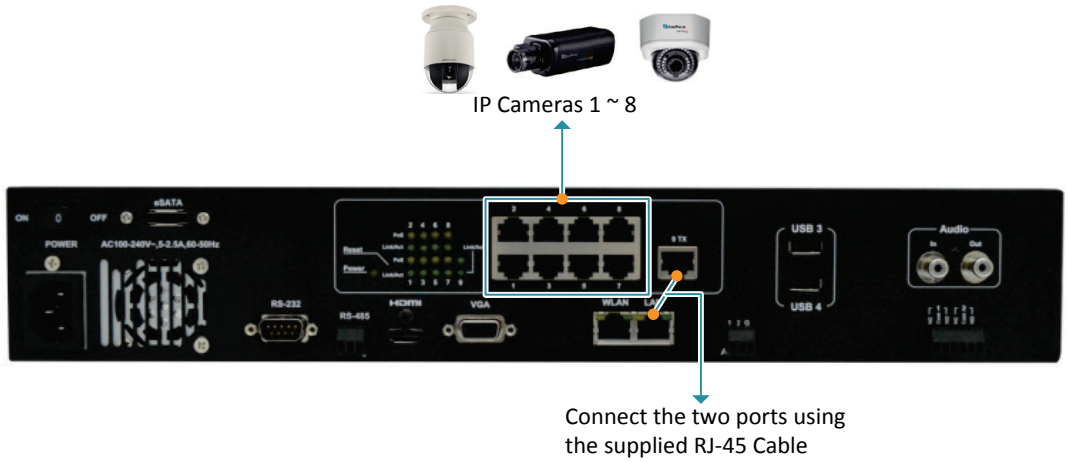


Figure 2-9

2.3.2 Cable Length Extension

The Ethernet connection is effective within 100 meters in distance. If the distance between the PoE switch and the IP cameras is over 100 meters, you need to use a hub, PoE injector or PoE extender, which should be connected to one camera only.

Note:

1. It is required to provide power supply additionally for the camera connecting by a hub for extension.
2. For stable connection and operation, the user should establish a dedicated communication line for IP cameras in the same network so that the router connection is not allowed.

ENVR8304D:

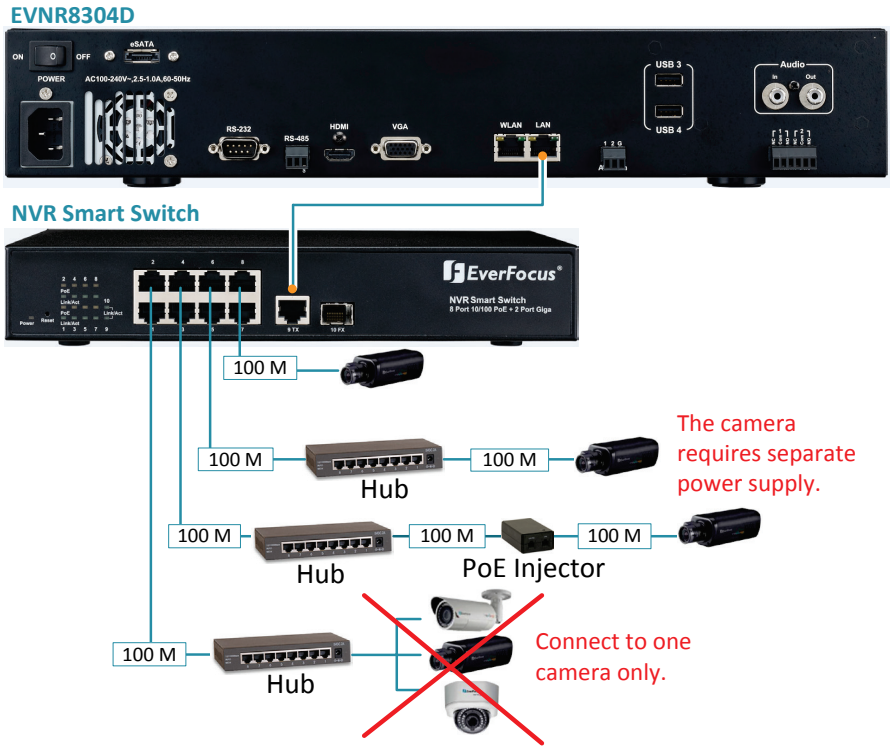


Figure 2-10

ENVR8304E:

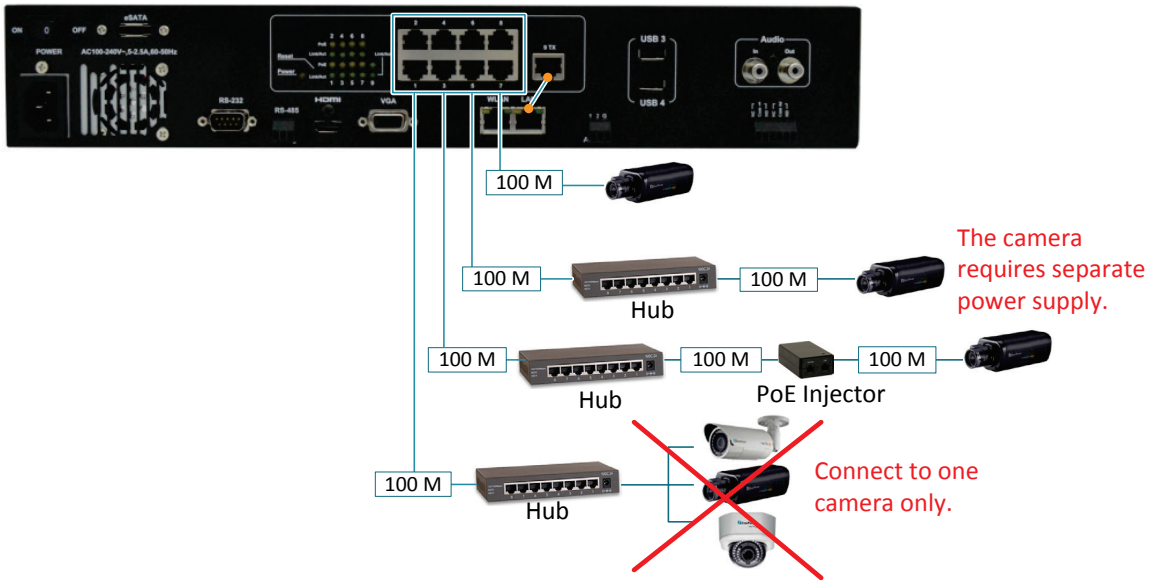


Figure 2-11

2.3.3 Monitor Connection

The NVR provides 2 main monitor outputs with identical functionality - VGA and HDMI. You can connect the monitor to the VGA or HDMI port on the rear panel of the NVR. Both of the VGA and HDMI video outputs can be used simultaneously and deliver full HD resolution (1920 x 1080, progressive, 60 Hz. Vert., 68 KHz hor.).

This figure uses ENVR8304D as an example.

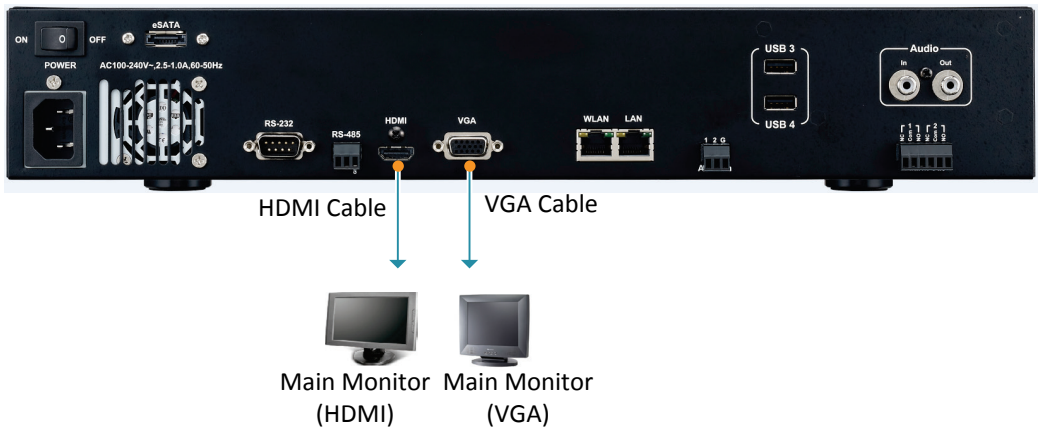


Figure 2-12

Note:

1. The connected monitors' specifications must comply with the resolution requirements.
2. Do not exceed the max. HDMI cable length of 15 meters.
3. The standard HDMI cables can support cable length up to 3 meters. For longer distances, such as 15 meters, it is highly recommended to use high quality HDMI cables.

2.3.4 Display Aspect Ratio

It is recommended to select the same ratio of the screen resolution and the camera live view display to avoid black bars showing on the live view screen as the images below.

If you select 1920x1080 (16:9) screen resolution in the **Screen Mode** drop-down list (see *6.5.1 Monitor OSD*), it is recommended to also change the camera live view display to 16:9 aspect ratio in the **Ratio** drop-down list (see *6.1.6 Adjust*).

Screen Mode: 1920x1080 (16:9)

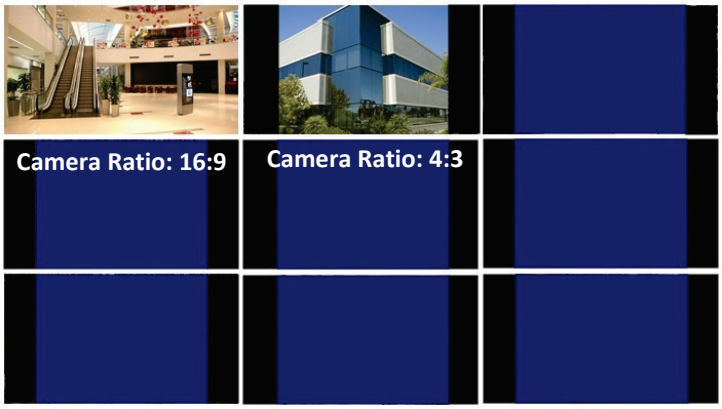


Figure 2-13

If selecting 800x600, 1024x768 or 1280x1024 (4:3) screen resolution in the **Screen Mode** drop-down list (see *6.5.1 Monitor OSD*), it is recommended to also change the camera live view display to 4:3 aspect ratio in the **Ratio** drop-down list (see *6.1.6 Adjust*).

Screen Mode: 800x600 / 1024x768 /1280x1024 (4:3)

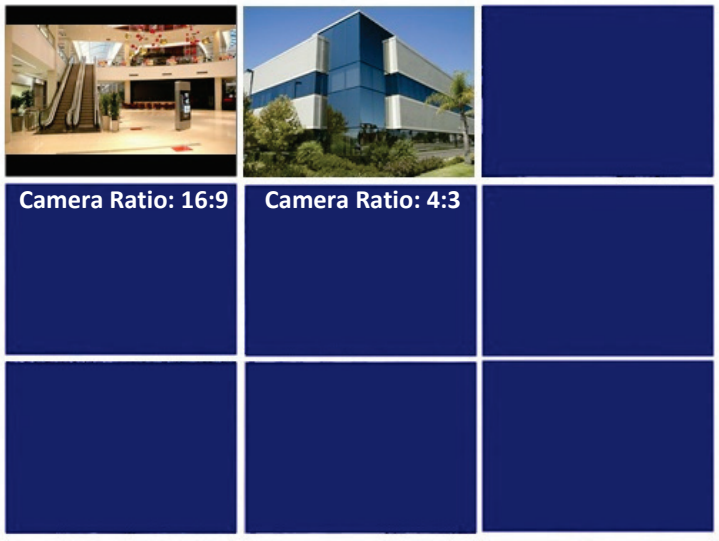


Figure 2-14

2.3.5 Alarm I/O

The NVR provides two alarm inputs and two alarm outputs. Please refer to the table below for PIN assignment.

Alarm In Alarm Out

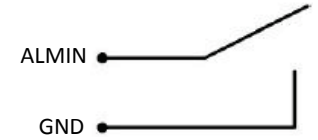
Figure 2-15

Alarm Input

No.	Description	No.	Description
1	ALM_IN1	2	ALM_IN2
G	GND		

Alarm Input Contacts

This NVR provides one alarm input per camera. All inputs are programmable N.O. (Normal Open) or N.C. (Normal Closed). All settings are programmed in the ALARM / Event menu.

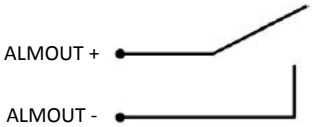


Alarm Input with N.O. contact in idle state

Alarm Input with N.C. contact in idle state

Alarm Output Contacts

The relay output provides either Normally Open or Normally Closed dry contacts.



2.3.6 RS-485 Port

The RS-485 port, located on the rear panel of the NVR, can be used to connect to an RS-485 keyboard, such as EverFocus' EKB500, for controlling NVR and HD PTZ cameras. For details on the RS-485 configurations on the NVR, please refer to *6.8.5 I/O Control*. The RS-485 pin assignment is as follows:

+ - G

Figure 2-16

2.3.7 RS-232 Port

The RS-232 port, located on the rear panel of the NVR, can be used to connect to an RS-232 data input device such as POS system. The RS-232 port of the NVR is a 9 pin D-Sub socket. For details on the RS-232 configurations on the NVR, please refer to *6.8.5 I/O Control*.

Figure 2-17

2.4 Turning On / Off the Power

Before powering on the NVR, please make sure the internal HDDs have been installed properly. When you have completed the basic cable connections, you are ready to turn on the NVR.

To turn on the power, connect the supplied Power Cord to the power outlet and turn on the **Power Switch**. All of the LED indicators on the front panel will light up for a second, but the Power and REC LED will remain light up. After hearing 1 beeps from the NVR, you can start operating. To turn off the power, simply unplug the Power Cord from the power outlet. You can also press the **Power Switch** on the rear panel to turn on and off the NVR without unplugging the Power Cord.

2.5 Connecting the NVR to the Network

There are three methods to connect the NVR to the network: **Router or LAN Connection**, **Direct High-Speed Connection** and **One-to-One Connection**. For more information of the network, please refer to *Appendix A. Network Overview*.

2.5.1 Router or LAN Connection

This is the most common connection in which the NVR is connected to a router and allows multiple users on and off site to see the NVR on a LAN/WAN (Internet). The NVR must be assigned an IP address that is compatible with its LAN. By setting up port forwarding on the router, you can remotely access the cameras from outside of the LAN via the Internet. To remotely access the Web interface, please refer to *7. Remote Access to the NVR*. To set up port forwarding, please consult the manual of the router or refer to *Appendix B: Linksys & D-Link Port Forwarding.*

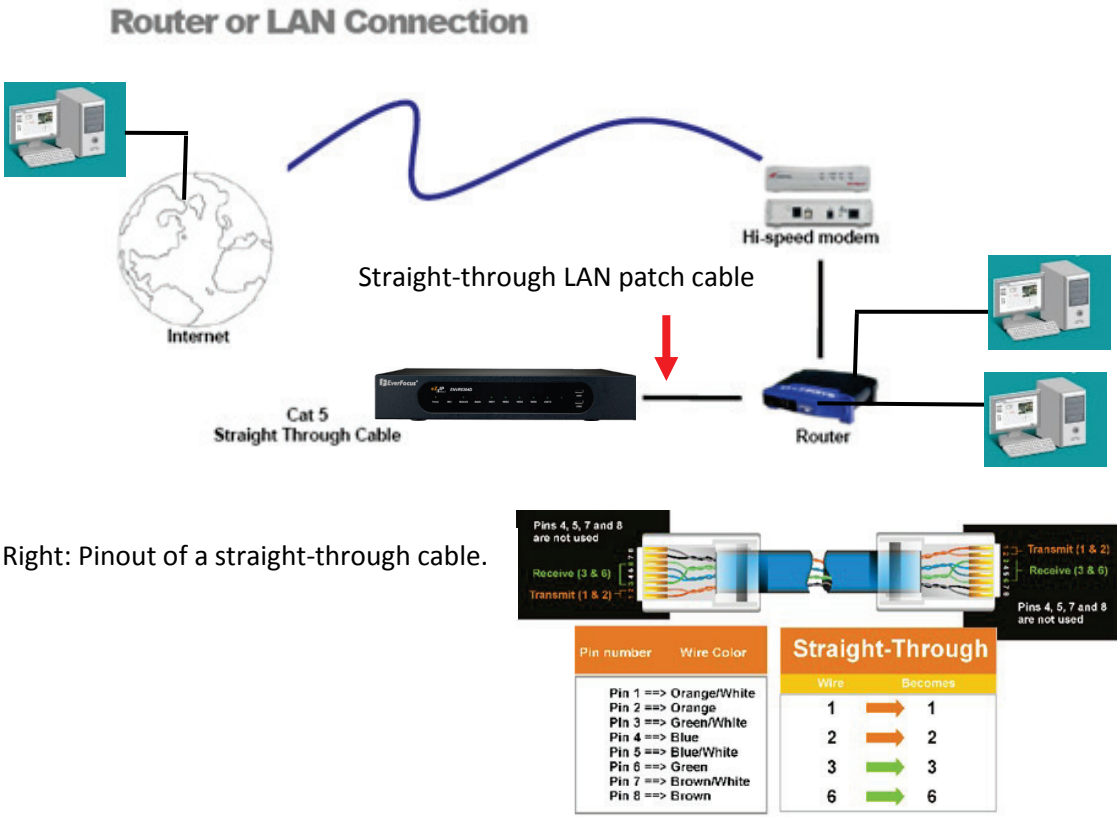


Figure 2-18

Connection Procedure:

- The First step is to purchase or make a straight through cable. We recommend purchasing one if you have never made a straight through cable. Please remember you can not use a cross-over network cable for this application.
- Once you have a straight through cable, plug one end into the LAN port on the back of the recorder and the other into the router.
- Log into the EverFocus NVR menu and go to the Network Setting Menu.
- To let the router automatically assign an address:
  - Set the Network Type to DHCP. Make sure to write down the IP address and the Gateway.
  - Exit from the Menu to save settings.

To manually assign an address:

- Go to a computer connected on the same network as the NVR.
- Click on the Start button and choose Run.

  If using Windows Vista, choose Search instead.
- Type “command” and click on OK.

  In Vista, you will need to double-click on the “Command Prompt” file to open it.
- In the DOS prompt, type “ipconfig” and press Enter.
- The network information will be displayed on a screen similar to the one below.

  In Windows Vista, look for the information that says “IP v4”.

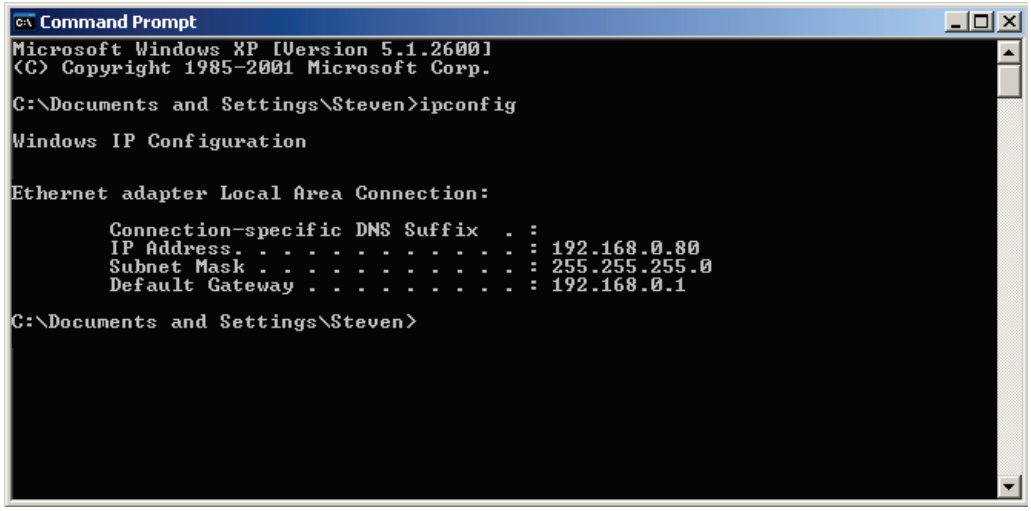

Command Prompt
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
C:\Documents and Settings\Steven>ipconfig
Windows IP Configuration
Ethernet adapter Local Area Connection:
Connection-specific DNS Suffix . :
IP Address. . . . . : 192.168.0.80
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.0.1
C:\Documents and Settings\Steven>

Figure 2-19

- Take the values for Subnet Mask and Default Gateway and input them into the NVR; these values should be exactly the same in both devices. However, you should change the last number of the IP address. For example, if the IP address of the computer is 192.168.2.101, the NVR's IP address should be 192.168.2.50.

➢ To access the NVR from a computer simply open Internet Explorer and in the address bar type:

http:// (IP address of the NVR)

Note: The NVR's IP address will only work at the location of the NVR. To connect from a different location over the Internet, see below.

To set the NVR for Internet Connection through router:

➢ The next step is to open ports within your router. Log into the router using a PC and open the following ports.

- Ports to open: 80
- If your Internet service provider blocks port 80, you can change it to a different port in the NVR's Network Menu Setup; open/forward that port instead.
- If you are using a Linksys or D-Link router, see *Appendix B* for basic support on setting up ports. For any other router, you will need to contact the manufacturer for support.

➢ To access the NVR from a computer simply open Internet Explorer and in the address bar type:

http:// (the IP address given by your internet service provider)

Note: If you changed to a different port other than 80, you will need to include this at the end of the IP address:
http:// (the IP address given by your internet service provider):port number

➢ If you have a WAN Dynamic IP address and have opened the ports, go to *6.7.3 DDNS Setup* to configure the DDNS settings.

2.5.2 Direct High-Speed Connection

In a Direct High-Speed Connection, the NVR connects directly to a modem without the need for a router. You need to set the static or dynamic WAN IP address assigned by your ISP (Internet Service Provider) in the NVR's configuration web pages. To access the NVR, just type "http://xxx", where xxx is the IP address given by your ISP. If you have a dynamic IP address, this connection may require that you use DDNS for a reliable connection.

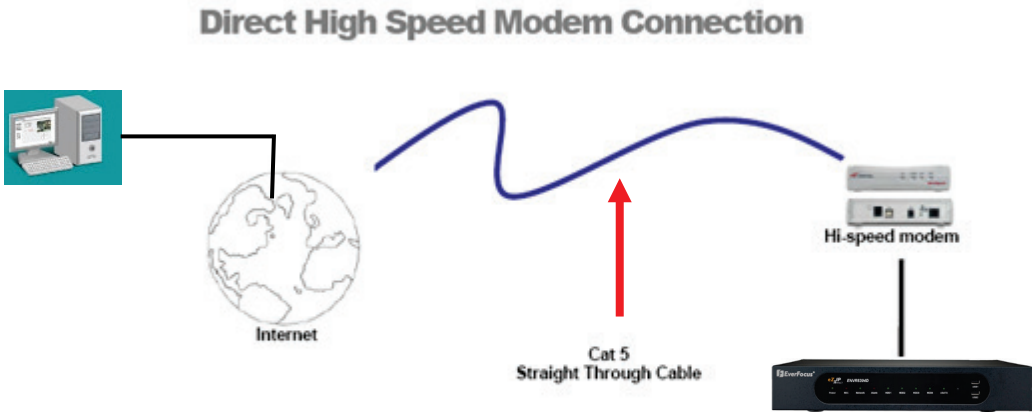


Figure 2-20

Connection Procedure:

- The first step is to purchase or make a straight through cable. We recommend purchasing one if you have never made a straight through cable. Please remember you can not use a cross-over network cable for this application
- Once you have a straight through cable plug one end into the LAN port on the back of the recorder and the other into the high speed modem.
- Log into the EverFocus NVR menu and go to the Network Setting Menu.
- Input the Static IP address, the Subnet Mask, and the Gateway that you obtained from the internet service provider.

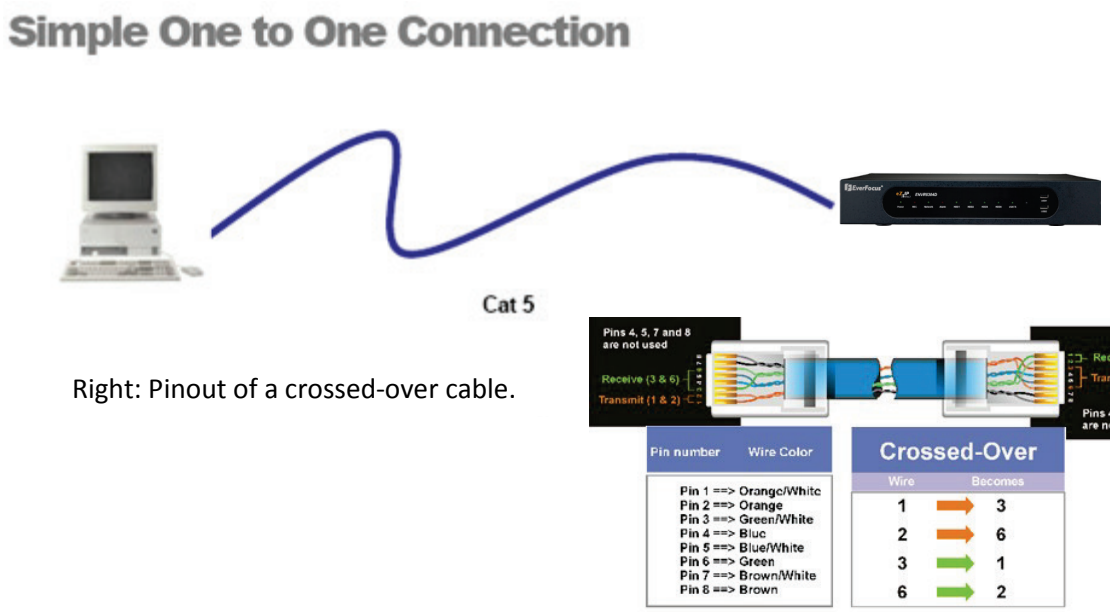
Note: If you have a dynamic IP address, you can set the NVR to DHCP to automatically detect the network settings. Therefore, it can use a dynamic IP address.

- Exit from the NVR's Menu to save the settings.
- To access the NVR from a computer, open Internet Explorer and in the address bar type: http:// (IP address given by your internet service provider)

Note: When using this type of connection, only one device can be connected to the modem at a time. You will need to use a computer at a different location to test the connection s.

2.5.3 One-to-One Connection

You can connect directly without using a switch, router or modem. However, only the PC connected to the NVR will be able to view the NVR. You will also have to manually assign a compatible IP address to both the computer and the NVR. Unless the PC has another network connection, the NVR will be the only network device visible to the PC. See the diagram below:



Right: Pinout of a crossed-over cable.

Figure 2-21

Connection Procedure:

- The First step is to purchase or make a cross-over cable. We recommend purchasing one if you have never made a cross-over cable. Please remember you can not use a straight through network cable for this application.
- Once you have a cross-over cable, plug one end into the LAN port on the back of the NVR and the other into the network card on the back of the computer.
- Log into the EverFocus NVR menu and go to the Network Setting Menu.
- You must use the Static IP option for this type of connection.
- Assign an IP of 192.168.001.003, a Subnet Mask of 255.255.255.000, and a Gateway of 192.168.001.001. You can ignore DNS Server.
- The next step is to set the computer's network settings to match those of the NVR. You will need Administrator privileges on your Windows machine to do this.
- To assign a fixed IP address in Windows 2000/XP, follow the instructions below:

- Go to **Start**. Double-click on **Control Panel**.

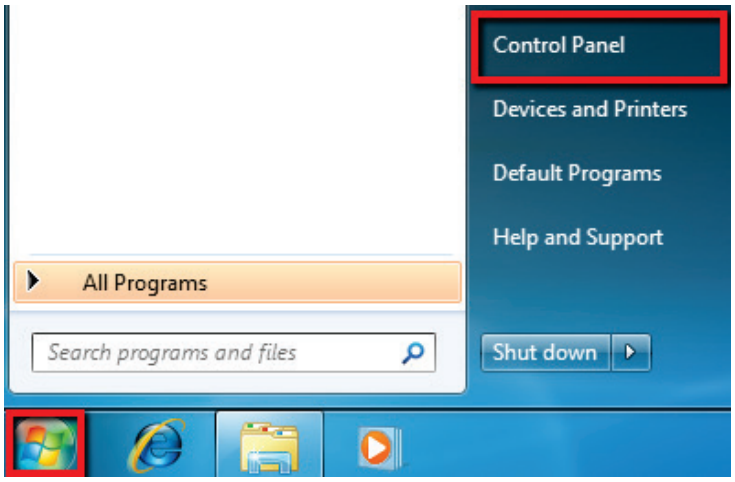


Figure 2-22

- Click **Network and Sharing Center**.

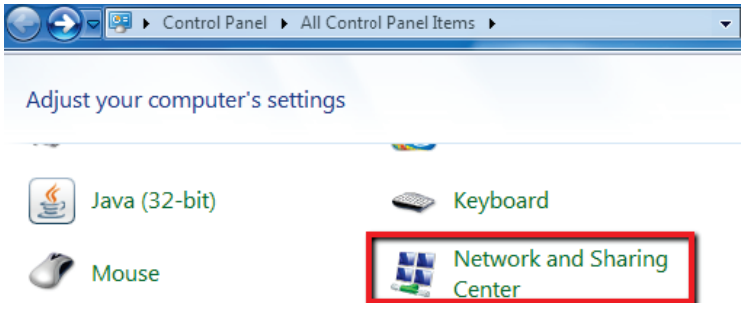


Figure 2-23

- Click **Local Area Connection**.

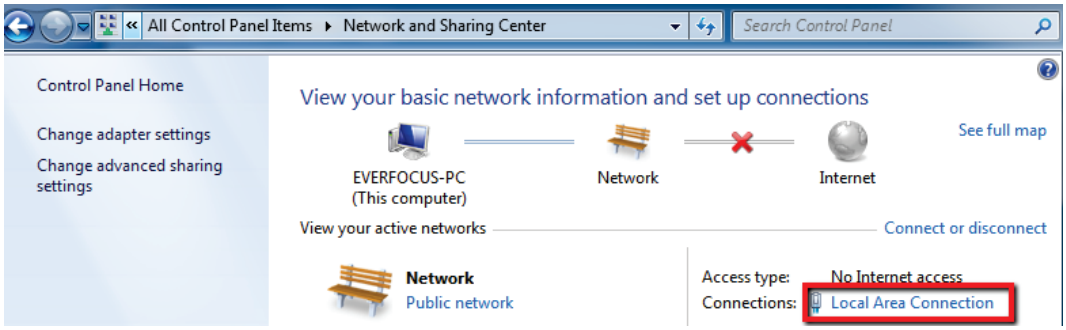


Figure 2-24

- Click **Properties**.

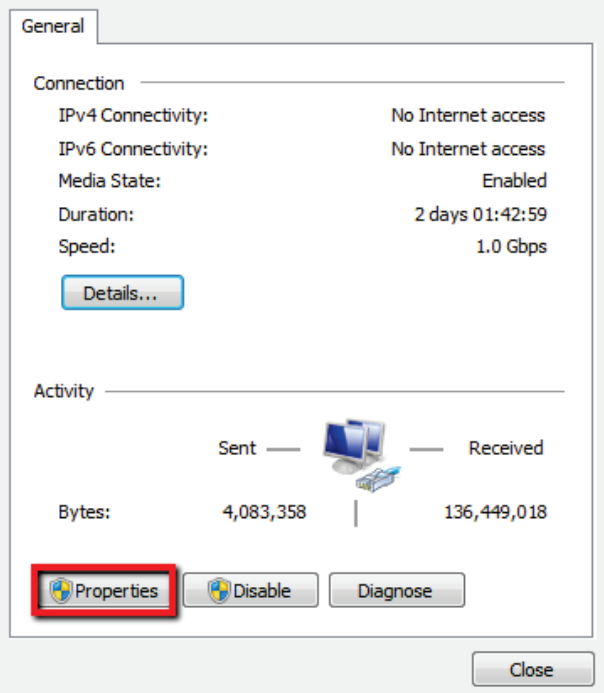


Figure 2-25

- Click on **Internet Protocol Version 4(TCP/IPv4)** and then click **Properties**.

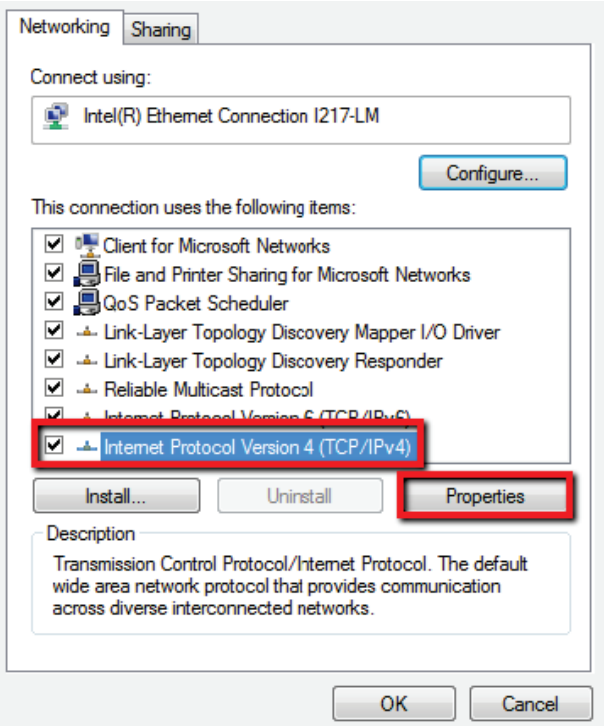


Figure 2-26

- Select **Use the following IP address**. Assign an IP address of 192.168.1.2, a Subnet Mask of 255.255.255.0, and a Default Gateway of 192.168.1.1 and then click **OK**.

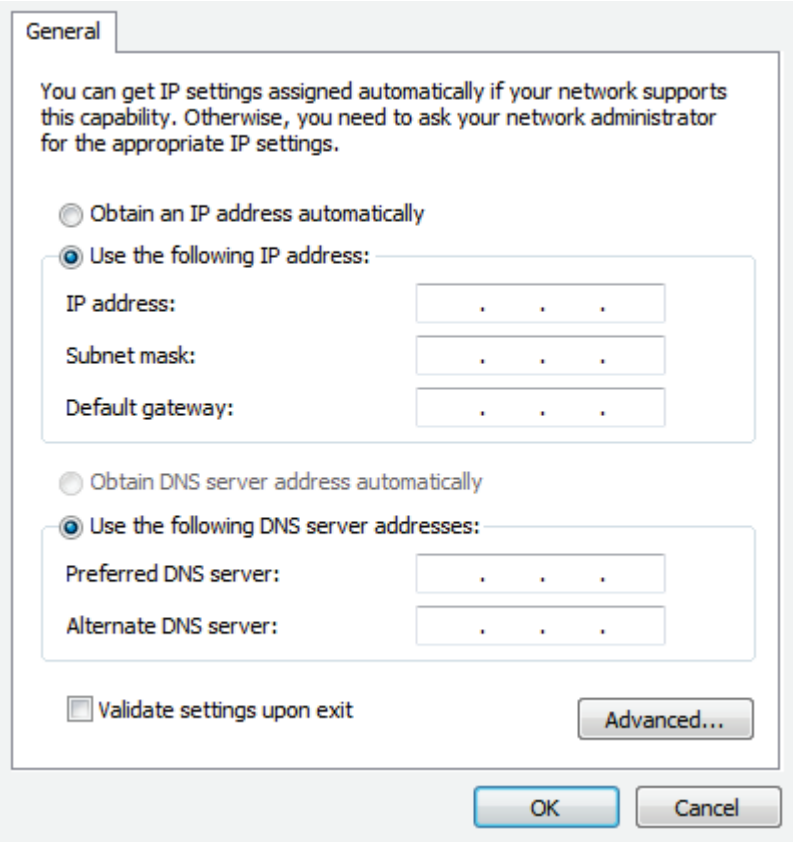

General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
Subnet mask:
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Validate settings upon exit
Advanced...
OK
Cancel

Figure 2-27

- Restart both of the computer and the NVR.
- To access the NVR from the computer, simply open Internet Explorer and in the address bar type: http://192.168.1.3

2.6 Checking the Dynamic IP Address

You can look up the IP address and access the Web interface of the NVR using the **IP Utility (IPU)** program, which is contained in the CD. It can also be downloaded from EverFocus' Website: http://www.everfocus.com/HQ/Support/DownloadCenter_p1.aspx. Please connect the NVR in the same LAN of your computer.

1. Install and then start the IPU program . The following dialog box appears.

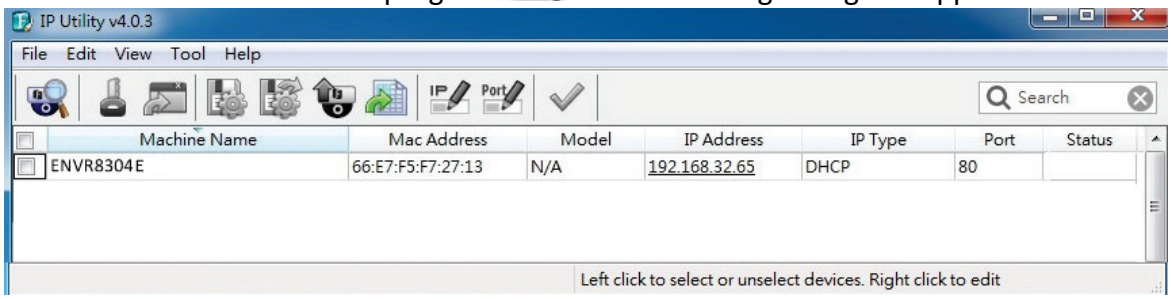


Figure 2-28

2. IPU will automatically search the IP devices connected in the LAN. The default network values of the IP devices will be displayed. By default, the network protocol of the IP device is **DHCP**.
3. To optionally configure the Machine Name, IP Address, IP Type or Port Number using the IPU:
   a. Log in the NVR by checking the desired model and then click the **Log in** icon. The Log in dialog box appears.

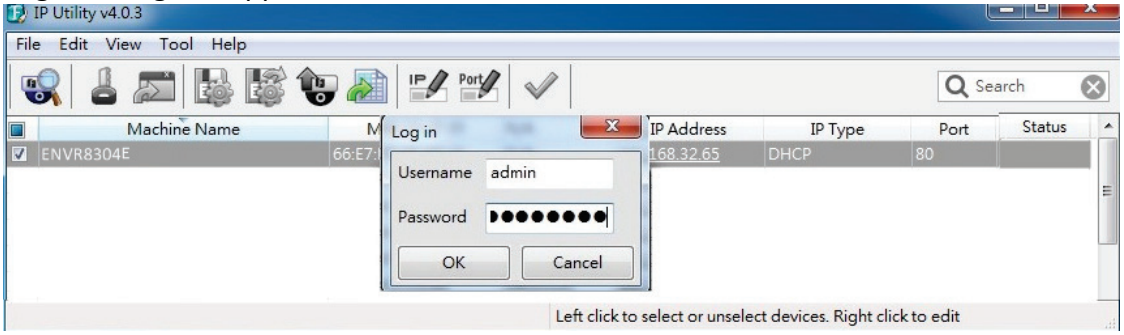
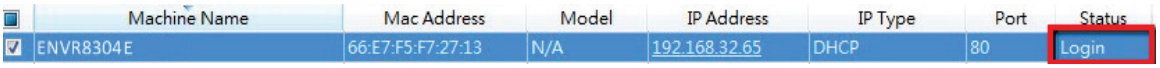


Figure 2-29

   b. Type the Username and Password. Click the **OK** button, the status of the selected camera will display **Login**.



Note:
1. The default user ID is **admin** and the default password is **11111111**.
2. If you select more than one NVRs that have the same user ID / password, you will be able to log in several NVRs at once.

c. Right click the column to configure the setting. Click **Apply Changes** button to apply and save the settings.

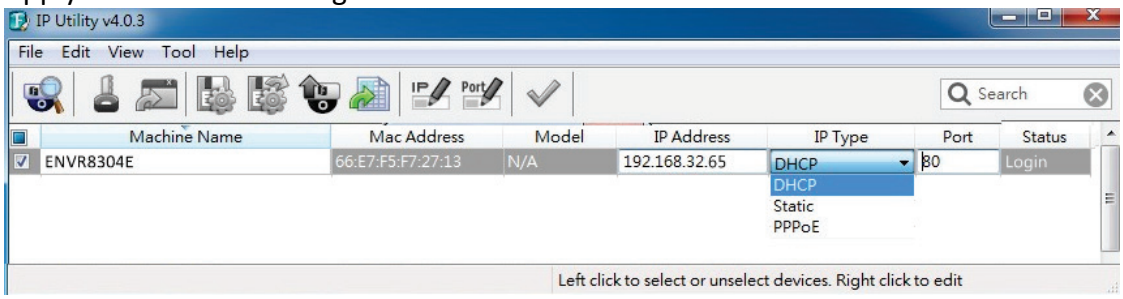


Figure 2-30

Note: Most networks uses DHCP to assign IP address, if you are unsure of your network settings, please consult your network administrators for configuration details.

4. To access to the Live View window, double click the IP address of the desired device, the login window pops up. Type the user ID and password to log in. By default, the user ID is **admin** and the password is **11111111**.

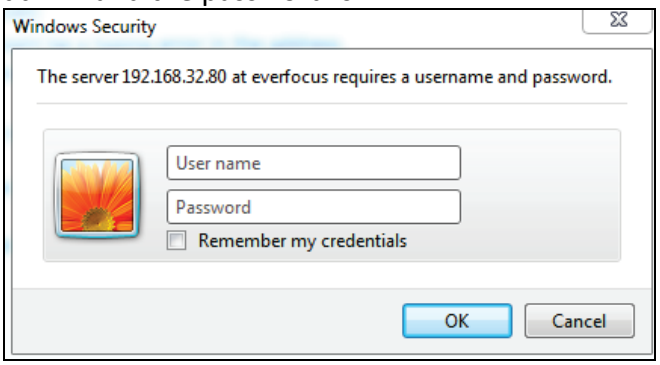


Figure 2-31

5. When first connecting to the NVR's IP address, the following dialog may appear. Please check the "Always trust content from this publisher" box and click the **Run** button to run the EverFocus Viewer application.

Security Information
The application's digital signature has been verified.
Do you want to run the application?
Name: EverFocusViewer
Publisher: EverFocus Electronics Corp.
From: http://192.168.13.129
Always trust content from this publisher.
Run
Cancel
This application will run with unrestricted access which may put your personal information at risk. The publisher's identity has been verified. Run this application only if you trust the publisher.
More Information...

Figure 2-32

6. You might be required to download **ActiveX** and **JAVA software** for viewing the camera feed. If asked, click **Yes**. For more details, please refer to *7.2 Install JAVA Runtime* and *7.3 Browser Security Setting*.

7. You may need to turn User Account Control off if you still can't see the Remote Live View.

8. On the computer, click Start > Control Panel > System and Security > Action Center (click Change User Account Control Settings), the **User Account Control Settings** window appears. Adjust the slide bar to **Never Notify** and then click **OK**. Restart your computer if requested.

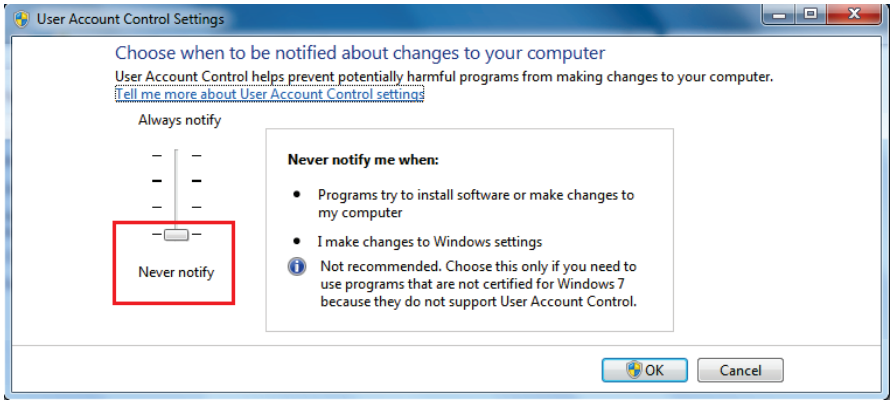

User Account Control Settings
Choose when to be notified about changes to your computer
User Account Control helps prevent potentially harmful programs from making changes to your computer.
Tell me more about User Account Control settings
Always notify
Never notify
Never notify me when:
Programs try to install software or make changes to my computer
I make changes to Windows settings
Not recommended. Choose this only if you need to use programs that are not certified for Windows 7 because they do not support User Account Control.
OK
Cancel

Figure 2-33

Chapter

3

3. General Operation

There are three ways to control the ENVR8304D-8CH / ENVR8304DE-8CH: with a **Mouse**, the handheld **IR Remote Controller**, or the optional device **EKB500 Keyboard**. For details on the IR remote control, please refer to *Appendix C, IR Remote Control*. This chapter will discuss the basic operations using the mouse and the front panel buttons.

3.1 Login

In order to access ENVR8304E-8CH, you may be prompted to log in for authority identification. To log in, follow the steps below.

1. Right-click on the screen, the Login window appears.

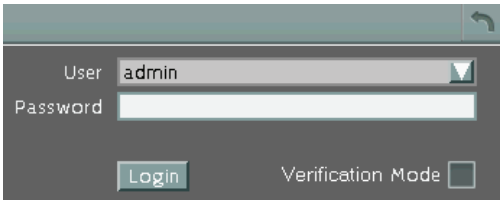


Figure 3-1

2. Select a user name from the drop-down list. Click the Password field to bring up the on-screen keyboard. Click the buttons and then click to confirm the User Name / Password.

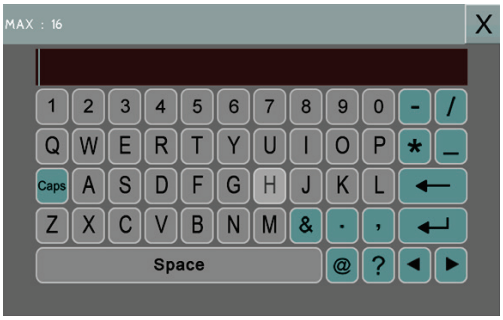


Figure 3-2

3. The default user name and password are:
   User: admin / **Password:** 11111111

> **Note:** For details on setting up multiple user accounts, please refer to *6.8.4 User Management*.

4. Click **Login** to log in the NVR.

3.2 Forget Your Password

1. If you forget your password, please email the **Serial Number** of the NVR to techsupport@everfocus.com, and then EverFocus will send you a verification code.
2. Input this verification code in the **Password** field of the Login window within 24 hours, and check the **Verification Mode** box.

Figure 3-3

3. Click Login to log in the NVR.

Note: This verification code is effective within 24 hours only, so please set up a new password in the System Setting page (refer to *6.8.4 User Management*).

3.3 Opening OSD Root Menu

1. Right-click the mouse, the OSD Root Menu appears.

Figure 3-4

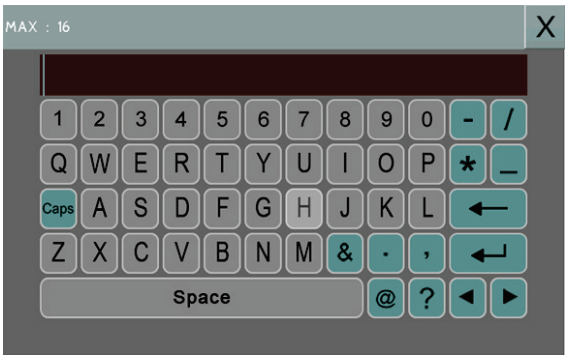
2. Click on any icon to enter the setup menus.
3. Click the button on the top-right corner or right-click to close the OSD Root Menu.

3.4 Field Input Option

You may found the following fields in the Configuration menu. Follow the instructions below to configure the settings.

Text Box: Click on the box and an on-screen keyboard will appear.

On-Screen Keyboard: Click on a button to input that character. The buttons on the right and bottom have the following functions:



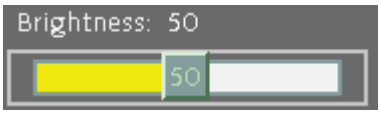
Caps	Switch to capital letters
←	Delete the letter backwards
↵	Confirm the selection
◄	Move to left
►	Move to right
Space	Enter a space

Drop-Down Box: Click on the down arrow to see all selections, then directly click on an option to select it.

Check Box: Click on the box to enable it (checked) or disable it (unchecked).

Button: Click the button to execute the function.

Bar: Slide the bar to the left or right for adjusting the set point.



3.5 Camera Selection

You can control each camera individually by selecting that camera. To select a camera, follow the instructions below:

1. Click a camera on the screen, and the selected camera will be highlighted with a red frame.
2. All cameras will be selected when you scrolling the mouse up / down between the first and the last channel.
3. Double clicking on a channel screen will display full screen for this channel.

3.6 Enabling Audio

In order to utilize the audio output function, you need to enable the Record Audio function. Please follow the instructions below before switching on the audio function.

Note: The Audio function is unavailable for Germany.

1. Connect the audio source and/or audio output device to the NVR. Note that both of the audio input and output devices require a (built-in) amplifier and external power supply.
2. Go to Camera setting menu (OSD Root Menu > Configuration > Camera > Basic).
3. Select a camera in the **Channel Number** drop down list.
4. Enable the **Record Audio** option. You can select multiple cameras to one single audio input device.

To turn on the audio function, please see the instructions below:

1. In the Live View window, select a channel by clicking once on the desired channel screen.
2. On the bottom of the screen, click the Audio icon to switch the Audio Output function to the desired camera.
3. Click the Audio icon again to disable the Audio Output function.

Note: The NVR only provide one channel audio output. You can switch the Audio Output function to either one from the 8 cameras.

4. OSD Root Menu

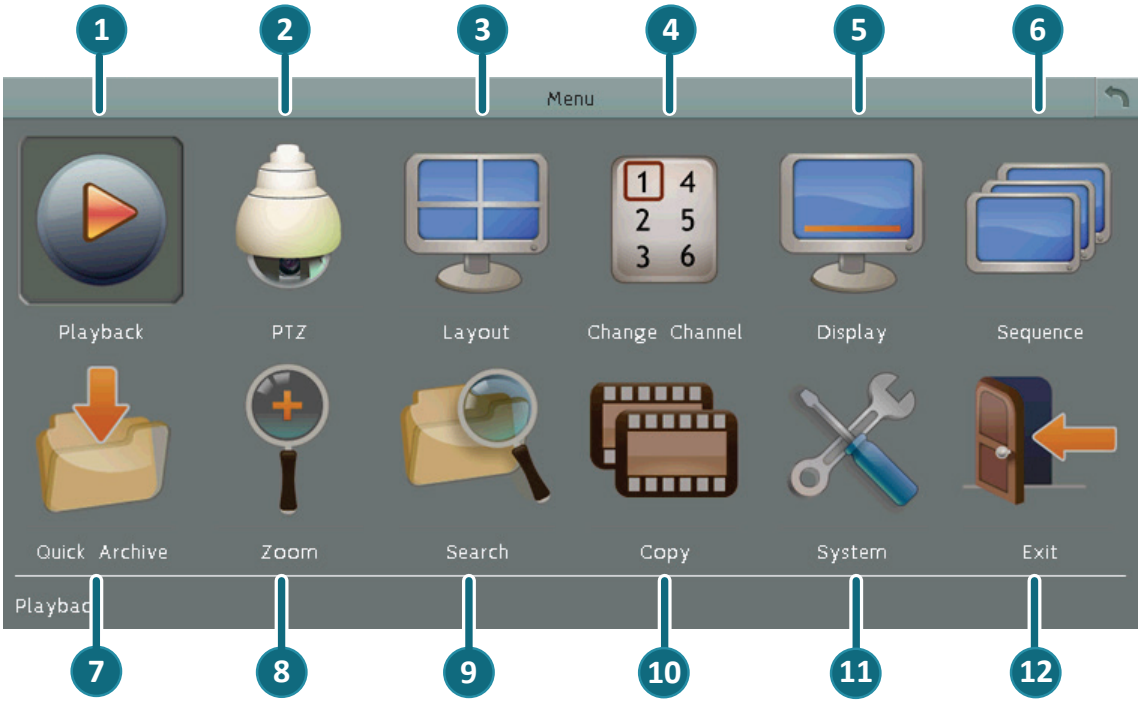
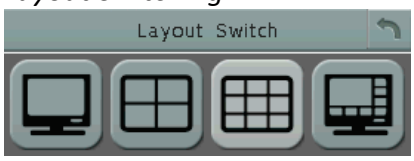


Figure 4-1

No	Name	Description
1	**Playback**	Click to display the Playback Bar for viewing the recording videos. For details, please refer to *5. Search and Playback.*
2	**PTZ**	Click to display the PTZ Control Panel for controlling the connected PTZ cameras. For details, please refer to *4.1 PTZ.*
3	**Layout**	Click to display the Layout Bar as shown below. Select a layout type for the live view display on the Main Monitor. For details, please refer to *4.2 Layout Switching.* 

4	**Channel**	Click to display the Channel Changing Bar as show below. To switch the selected camera to a specific channel, please refer to *4.3 Channel Switching*.
5	**Display**	Click to display system information icons or status icons on the live view screen. For details, please refer to *4.4 Display*.
6	**Sequence**	Click to enter the auto sequential switching mode. Click again to disable. For setting up the sequencing order, please refer to *6.5.2 M/T SEQ.*
7	**Quick Archive**	Click to quickly archive all the recordings and the EFPlayer software to your USB storage device. For setting up the quick archive interval, please refer to 6.2.2 Quick Archive.
8	**Zoom**	Click to enter the Zoom mode. You can zoom in the camera view up to x4 and navigate the camera view. For details, please refer to *4.6 Zoom*.
9	**Search**	Click to display the Search menu for setting up the Search mode for playing back. For details, please refer to *5.3 Searching the Recordings for Playback Back.*
10	**Copy**	Click to display the Copy menu for archiving the recordings or log data to the USB storage device or DVD. For details, please refer to *4.7 Archiving the Recordings or Log Data to the USB.*
11	**Configuration**	Click to enter the Configuration menu. Please refer to *6. Configuration*.
12	**Logout**	Click to bring up the Logout Confirmation window and then click Yes to log out the system (see *4.8 Logout*). To log in, please refer to *3.1 Login*.

4.1 PTZ

You can use the PTZ Control Panel to control the connected PTZ cameras. To bring up the PTZ control panel, on the OSD Root Menu, click the PTZ button .

The following actions can be performed using the PTZ Control Panel:

Figure 4-2

1. To move the camera to the desired direction and angle, click the **Direction** buttons.
2. To zoom in / out the camera view, click the **Zoom** buttons.
3. To adjust the camera focus, click the Focus buttons.
4. To adjust the Iris open to increase / decrease the amount of light in, click the **Iris** buttons.
5. To program a Preset Position (if supported by the camera):
   a. Move the PTZ camera to the desired position.
   b. Click the **Preset** button.
   c. Set up a preset number for the current position by clicking the number buttons. The number will be displayed in the number box.
   d. Click the **Set** button to save the settings.
6. To jump to a Preset Position:
   a. Click the **Preset** button.
   b. Click the desired Preset number.
   c. Click the **Go** button.
7. Shortcut for Preset 1 ~ 9:
   a. Click digit 1 ~ 9 button without clicking any other buttons.
   b. The camera will seek that Preset Position.
8. To delete a Preset Position (if supported by the camera):
   a. Click the **Preset** button.
   b. Click the desired Preset number.
   c. Click the **Delete** button.

9. To operate the Auto Pan function, click the **Auto Pan** button.
10. To operate the Pattern function, click the **Pattern** button. The Pattern is the "0" Tour in EverFocus and Pelco PTZ cameras.
11. To operate the Tour function:
    a. Click the **Tour** button.
    b. Click the desired Tour number.
    c. Click the **Go** button.
12. To remove a pre-configured Tour (if supported by the camera):
    a. Click the **Tour** button.
    b. Click the desired Tour number.
    c. Click the **Delete** button.
13. To start the auto-tracking function, click the **Track** button.
14. To start tracking a selected object on the screen, click the **Object** button. When the object selection box displays on the screen, click to select an object to start auto tracking. Once the PTZ camera loses track of the object, the camera will return to the auto tracking start point. Please select forward position in the object movement path to get better tracking result.

Click **C** to clear the entered number in the Number Box.

Click at the top-right corner to hide the PTZ Control Panel (see *4.1.1 Express Control of PTZ*). To display the PTZ Control Panel, right-click on the screen.

Click **Logout** to close the PTZ Control Panel and exit the PTZ mode.

Note: Before start using the Auto Pan, Pattern, Tour, and Tracking functions, you have to configure the related settings for the connected PTZ cameras. Please refer to *6.1 Camera* or the User's Manual of your PTZ cameras.

4.1.1 Express Control of PTZ

If the PTZ Control Panel has first been opened and then hidden, the mouse can be used to control basic PTZ functions. Move your mouse cursor on the screen, the mouse cursor will turn into a control icon (direction, focus or zoom) in different areas of the screen. You can control PTZ direction, focus and zoom by clicking directly on the screen.

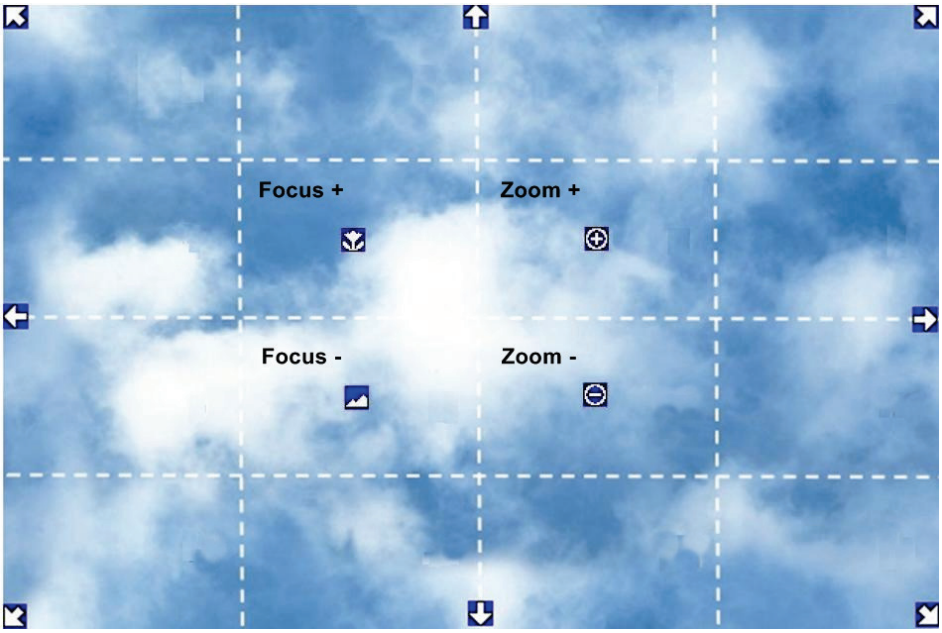


Figure 4-3

Direction Controls: When your mouse cursor turns into a direction icon, click on the screen will force the camera to turn in that direction.

Focus Controls: When your mouse cursor turns into , click on the screen will focus closer the image. When your mouse cursor turns into , click on the screen will focus farther the image.

Zoom Controls: When your mouse cursor turns into , click on the screen will zoom in the image. When your mouse cursor turns into , click on the screen will zoom out the image.

4.2 Layout Switching

The NVR have 4 screen division types available. The seven layouts are shown as below:

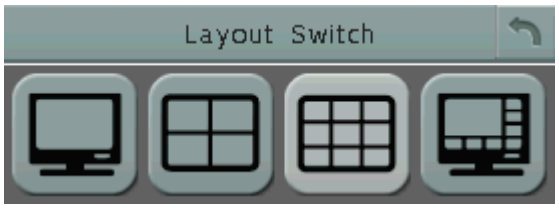


Figure 4-4

To change layout, follow the steps below:

Right-click to bring up the OSD Root Menu and click the Layout icon. Click on the desired layout.

4.3 Channel Switching

You can switch the selected camera to a specific channel. Follow the steps below:

1. On the live view screen, select a camera, the selected camera will be highlighted with a red frame.
2. Right-click to display the OSD Root Menu.
3. Click the **Channel** icon

, the Channel Bar appears.

Figure 4-5

4. Select a channel, the selected camera will be switched to that channel.

4.4 Display

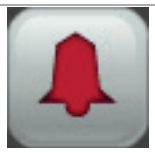
You can display system and camera status on the live view screen. Follow the steps below:

1. Click the Display button on the OSD Root Menu or press the Display button on the front panel to display the system and camera status. Click the button to choose the desired display mode:

2. The following icons will be displayed at the top-left side of each camera stream to show each camera's status.

Recording	Playback	Fast Forward	Fast Backward	Back	Pause
Alarm	Motion	Video loss	Uninstall	Audio On	

3. The following icons will be displayed at the bottom of the monitor to show the system status.

Audio On	Audio Off	 Alarm	Motion	Video loss
No network LAN	No Network WAN	Main	Event	Sequence
HDD failure	HD temp. too high			

4. There are four display modes, and you can click the Display button to change the display mode: (1) Display both the camera and system status icons. (2) Display only the camera status icons. (3) Display only the system status icons. (4) Hide both the camera and system status icons.

4.5 Sequence

The sequence function is used to display each channel in sequence mode. To enable this function:

Click the Sequence button to enter the sequential switching mode. The NVR will display one channel at a time in full screen. The channels will be displayed in the sequence and for the amount of time as configured in the System > Display Setting > M/T SEQ submenu. The default setting is channels 1~8 with a dwell time of 3 seconds each – repeated. Please refer to *6.5.2 M/T SEQ* for detailed information.

4.6 Zoom

You can zoom in the camera view up to 4X and navigate the camera view using the mouse.

Figure 4-6

To enter the Zoom mode:

1. Select a camera and then click the **Zoom** button on the OSD Root Menu to zoom in the camera view to 2X. The ZOOM 2X stamp will be displayed on the top screen.
2. Navigate the camera view to the desired position by moving your mouse cursor over the camera view. The mouse cursor will turn into a direction icon when you move your mouse cursor to different portion on the camera view. Click directly on the screen can move to that direction.

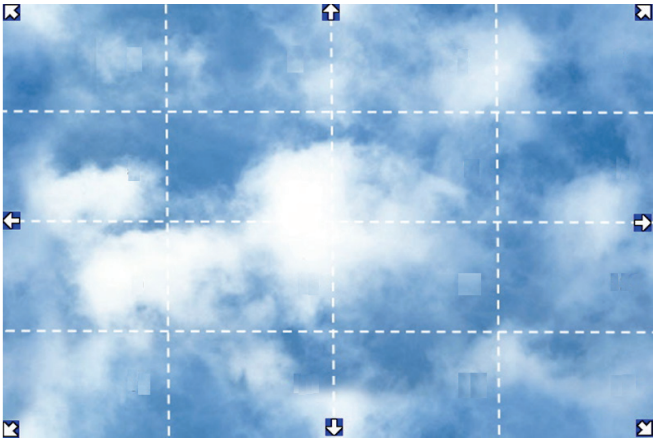


Figure 4-7

3. Right-click the screen, the Zoom Bar appears in the middle of the screen.
4. Click to zoom in the camera view up to 4X.
5. Click the **Logout** button to log out the Zoom mode.

4.7 Archiving the Recordings or Log Data to the USB

You can archive the recordings or log data (event and motion) to the USB storage device. On the OSD Root Menu, click the **Copy** icon , the following menu appears.

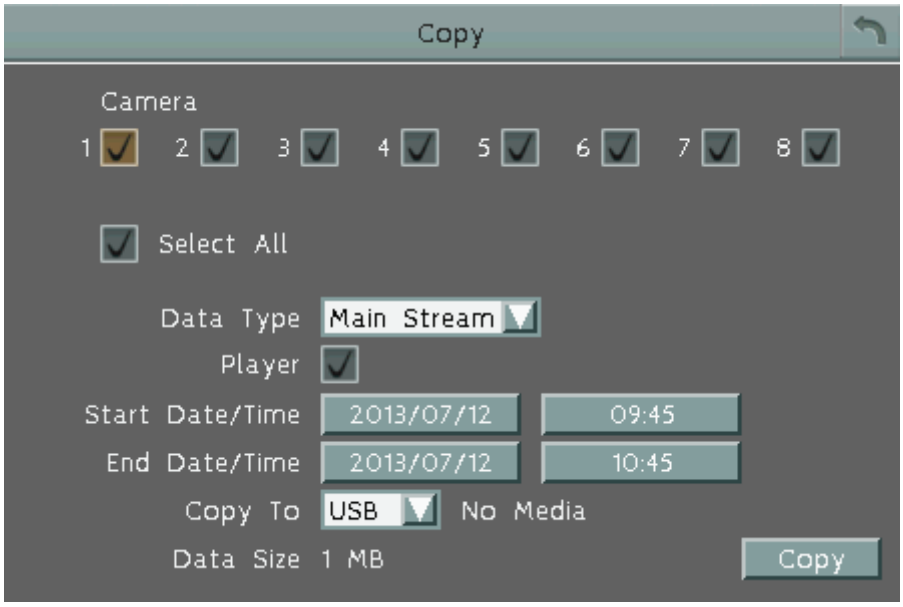


Figure 4-8

Camera: Select the desired cameras.

Data Type: You can copy the recordings of selected cameras from main stream or sub stream.

Player: Check the box to include the **EFPlayer** program in the copy. You can use the EFPlayer on a computer to play back the recordings.

Start Date / Time: Click to bring up the on-screen keyboard / clock to select the start date / time.

End Date / Time: Click to bring up the on-screen keyboard / clock to select the end date / time.

Copy To: Select whether you want to copy to USB. The log data can only be archived to the USB storage device.

Data Size: Shows the size of the data which you want to copy.

Copy: Click to start archiving.

EFPlayer:

Unzip the EFPlayer file and double-click to open it as below. The EFPlayer can only display up to 16 channels at one time.

Figure 4-9

No.	Name	Function Description
1	**Information**	Shows the recording information of the device, including model of the recorder, recording start time / date, current playback time, recording end time / date.
2	**Load**	Click to select a recording file and open it.
3	**Save as AVI**	Click to archive the recording file of 1 channel and save as AVI format.
4	**Time Search**	Click to search a recording from a selected time.
5	**Channel Switch**	Click to switch channel bar between CH1~16 and CH17~32.
6	**Time Bar**	Move the time bar to a desired time to play back the recording from that time.

7	**Playback Controls**	: Click to fast reverse / fast forward. : Click to reverse play /play. : Click to pause play backing.
8	**Snapshot**	Click to take a snapshot of the channels displayed on the UI. You can save the snapshot file to a desired location.
9	**Mute**	Click to mute; click again to turn off the mute function.
10	**Volume**	Drag to increase or lower the volume.
11	**Scale Out / In**	Click to adjust time scale.
12	**Screen Division**	: Click to display the channels to fit the screen. : Click to select a desired screen division display mode (1, 4, 9, 16 screen division display modes). If the channels are more than the screen divisions, you can select the same screen division display mode to change the channels on the screen.
13	**Speed**	Shows the fast reverse / forward speed (up to 64X).

4.8 Logout

You can log out the NVR by clicking the Logout icon on the OSD Root Menu to bring up the Logout Confirmation window as Figure 4-9. Press "Yes" when you are ready to logout of the system. You will need to login again before accessing the OSD Root Menu.

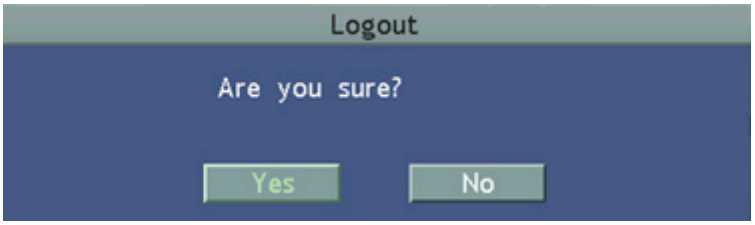


Figure 4-10

If you do not need the Login / Logout step before entering the Root Menu, please uncheck the **Login** box in the User Management setting page. For more details, please refer to *6.8.4 User Management*.

Figure 4-11

Chapter
5

5. Search and Playback

You can use the Quick Playback function to play back the recordings start from the pre-configured time or use the Search functions to search for the desired recordings for playing back.

5.1 Quick Playback

To start using the Quick Playback function, follow the steps below:

1. To set up the start time of the playback recording, check the **Quick Playback** box in the **Playback** setting page (OSD Root Menu > Configuration > Record & Playback > Playback) to enable the configured time in the field below.
2. Enter the desired time for playing back the recording. Take 60 seconds for example, if the current system clock time is 17:35:00, the start time for the playback recording will start from 17:34:00 (60 seconds ago from 17:35:00).

Figure 5-1

3. On the Live View Window, select a desired camera or select all channels, right-click to bring up the OSD Root Menu, and then click the Playback button .
4. The recording has been playing back and the Playback Bar appears on the bottom of the screen.

5.2 Playback Bar

The playback bar is the fastest way to show video from the exact time which users want to see. The playback bar allows users to see both a timeline and the current playback indicator. Users can then click the timeline to move the indicator to the desired position.

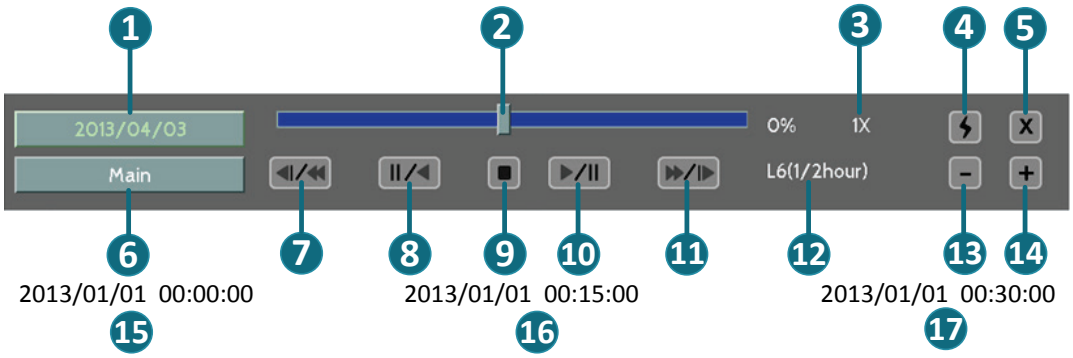


Figure 5-2

No.	Name	Description
1	**Date/Time**	Click to set up the start time of playback recording.
2	**Time Bar**	Move the slider to the left / right on the Time Bar to select the time for playing back. The status of each camera is presented by different colors on the Time Bar. Green→Normal, Orange→Motion, Blue→Video Loss, Red→Alarm Event.
3	**Playback Speed**	Indicates the current Playback Speed.
4	**Express Copy**	Click to bring up the Copy menu for archiving the recordings / log data to the USB storage device or DVD burner. For details, please refer to *4.7 Archiving the Recordings or Log Data to the USB.*
5	**Close**	Click to hide the Playback Bar. To bring up the Playback Bar again, move your cursor to the lower side of the screen.
6	**Main /Sub Stream**	Click to select the recorded data from main or sub stream
7	**Fast Reverse**	Click to play the recorded data in fast reverse.
8	**Reverse Play/Pause**	Click to play the recorded data in reverse at normal speed. Click this button again to Pause the reverse playback. Click the **Stop** button to stop all playback actions and exit the playback area.
9	**Stop**	Click to stop either the Reverse, Fast Reverse, Play, and Fast Forward functions, if that function is active. This button stops all Play functions, but no Recording functions.

No.	Name	Description
10	**Play/Pause**	Click to play the recorded data forward. Click this button again to Pause the playback. Click the **Stop** button to stop all playback actions and exit the playback area.
11	**Fast Forward**	Click to play the recorded data in fast forward.
12	**Time Scale**	L1: Entire Time Bar scale is 30 days. L2: Entire Time Bar scale is 2 weeks. L3: Entire Time Bar scale is 1 week. L4: Entire Time Bar scale is 1 day. L5: Entire Time Bar scale is 1 hour. L6: entire Time Bar scale is 30 minutes.
13	**Time Bar Scale**	Use the **+** and **-** buttons to adjust the time scale range for the bar. The scale range includes 6 options (levels). When changing the level, the Start Time and End Time will change.
14		
15	**Start Time**	Indicates the playback start time.
16	**Current Playback Time**	Indicates the current playback time.
17	**End time**	Indicates the playback end time.

5.3 Searching the Recordings for Playing Back

You can search the recordings for playing back by using the **Search** menu. On the left side of the Search menu, select **Time Search**, **Event Search** or **Snapshot Search** to enter to the setup menu.

To bring up the **Search** menu:

Right-click to bring up the OSD Root Menu, and then click the **Search** button .

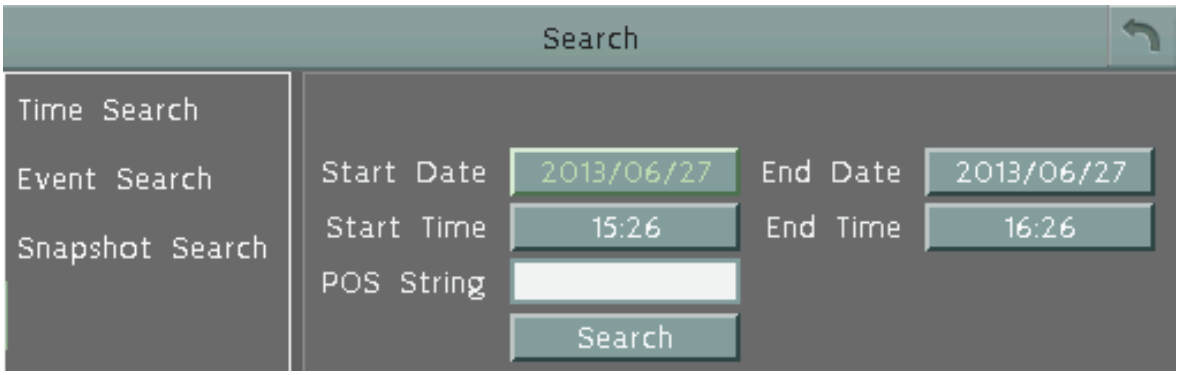


Figure 5-3

5.3.1 Time Search

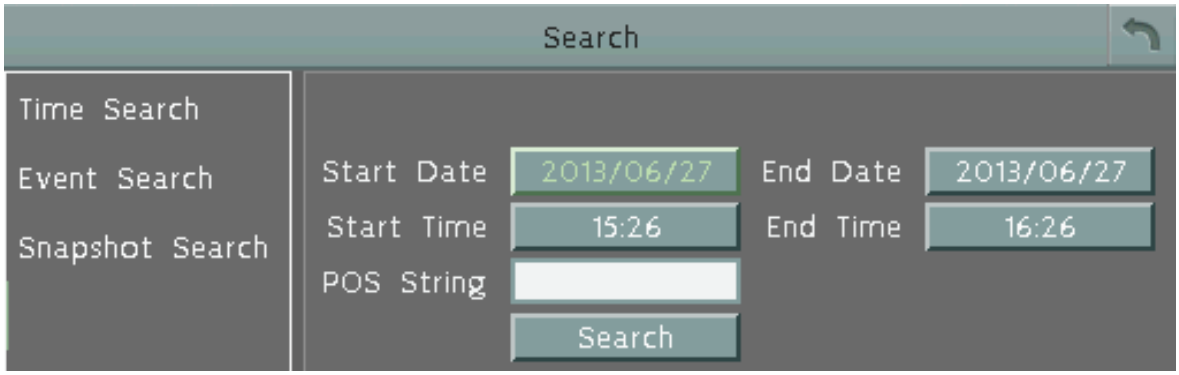


Figure 5-4

Start Date: Click to bring up the on-screen keyboard to select the date.

Start Time: Click to bring up the on-screen clock to select the time.

Play: Click to start playing back.

5.3.2 Event Search

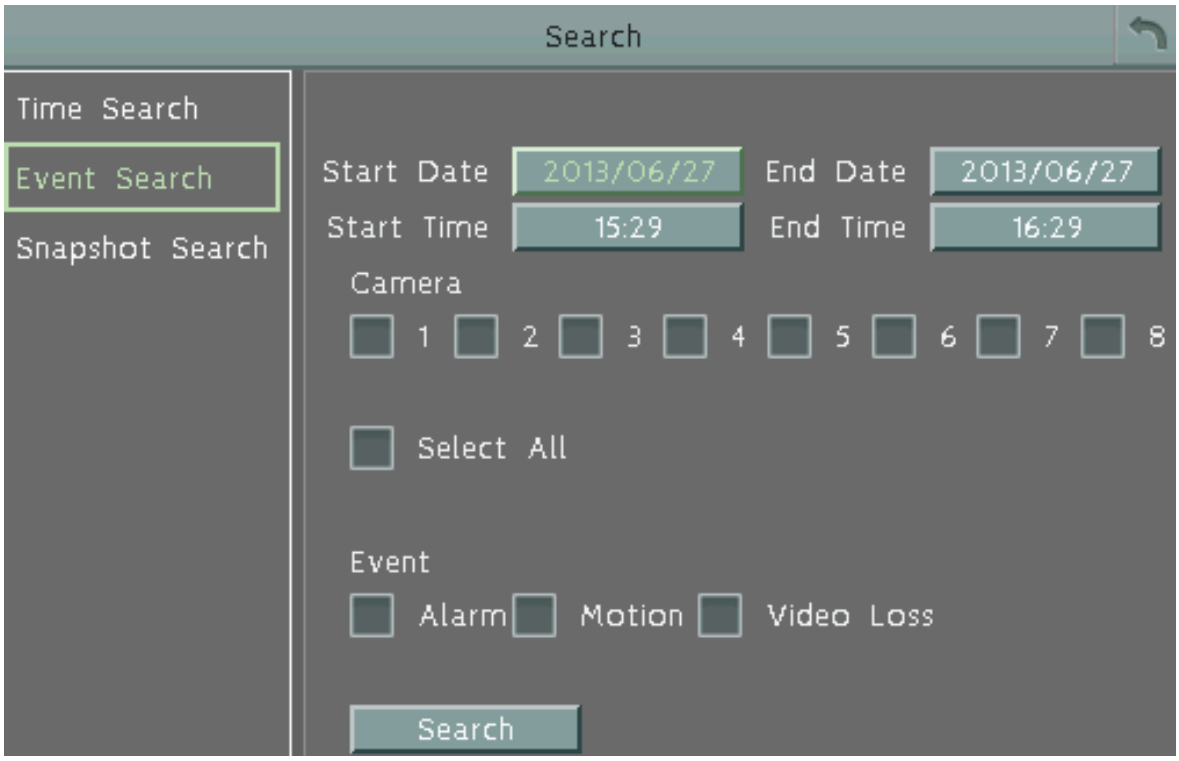


Figure 5-5

Start Date / End Date: Click to bring up the on-screen keyboard to select the start / end date.

Start Time / End Time: Click to bring up the on-screen clock to select the start / end time.

Camera: Select the desired cameras to be searched.

Event: Select an event type to be searched.

Search: Click to start searching. The search results will be listed in the Event List menu as shown below.

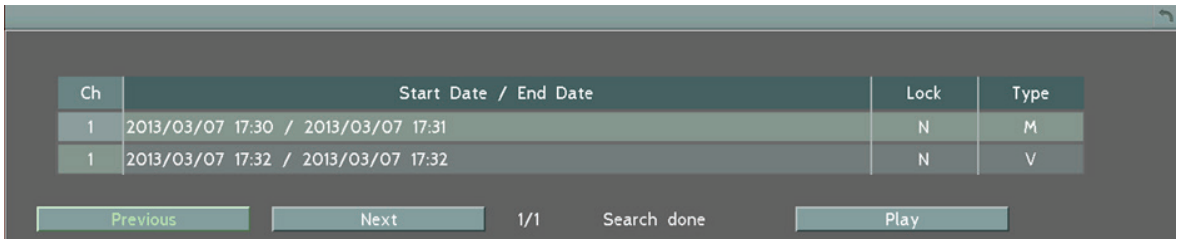


Figure 5-6

Previous / Next: Click to go to the previous / next page.

Play: Click to playback the selected items.

5.3.3 Snapshot Search

You can display video frames in snapshot and resume a video from where the snapshot has been set up.

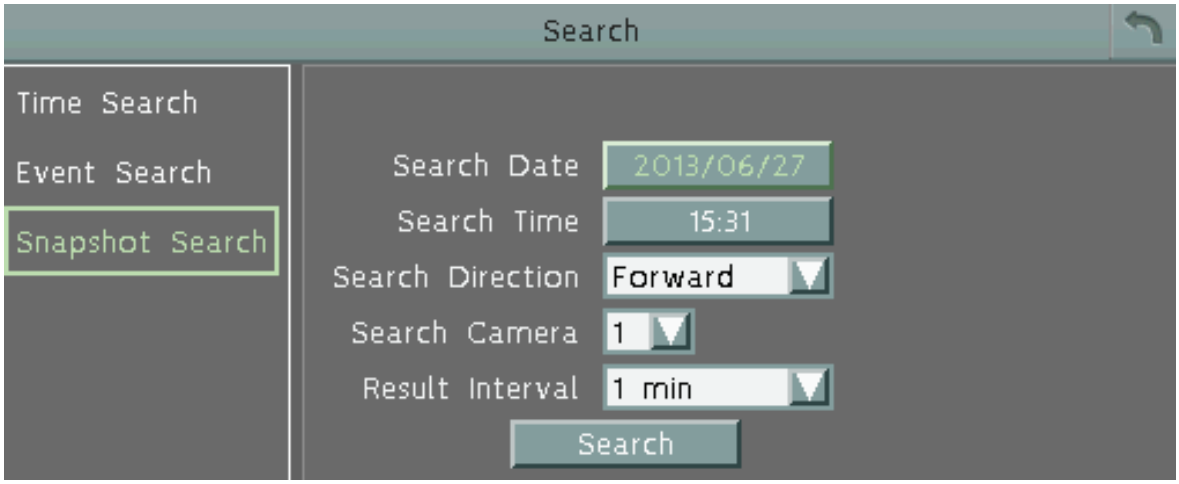


Figure 5-9

Search Date: Click to bring up the on-screen keyboard to select the date.

Search Time: Click to bring up the on-screen clock to select time.

Search Direction: Click to search forward / backward based on the setup time above.

Search Camera: Select a desired camera to be searched.

Result Interval: Click to set up the interval for the snapshots of the video frame. For example, if you select 5 minutes, the video frame will be snapshotted with 5-minute interval (see image below).

Search: Click to start searching. The search results will be displayed in 16 screen division (see image below).

To resume the video:

1. Click the **Search** button, the search results are displayed in 16 screen division. In this picture, you can see the time layouts on the upper-left corner of each snapshot, which are set up with 5-minute interval.

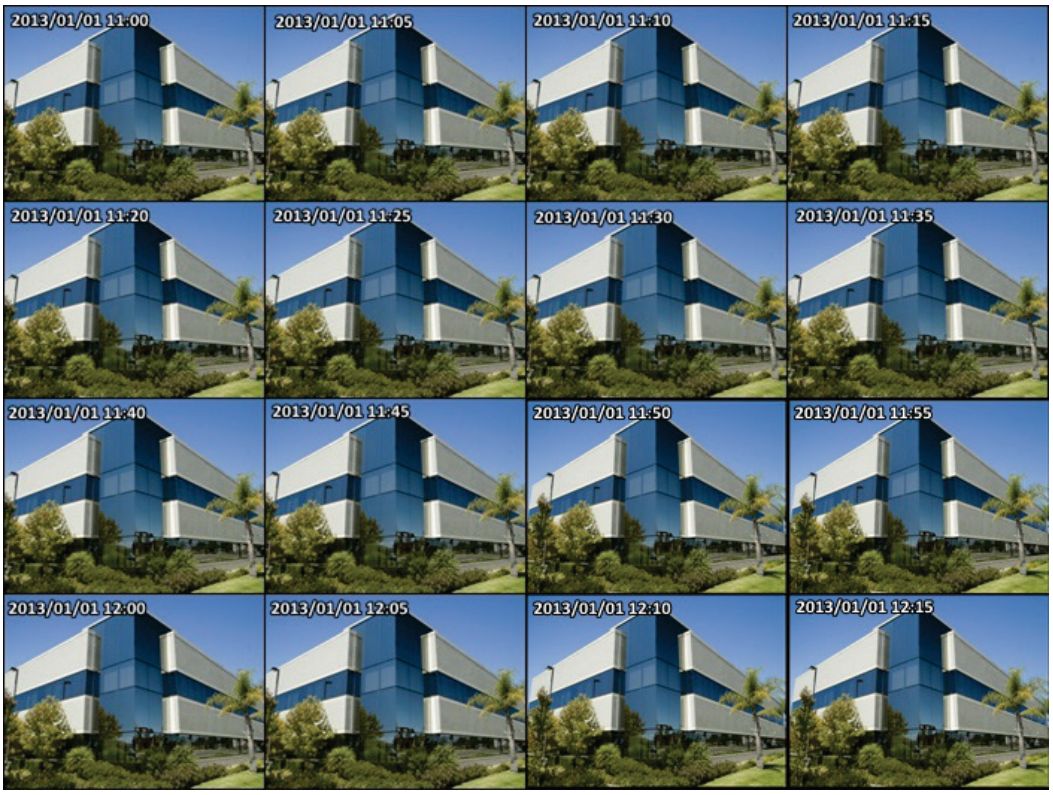


Figure 5-10

2. Right-click on the screen, the Resume Playback Bar appears in the middle of the screen.

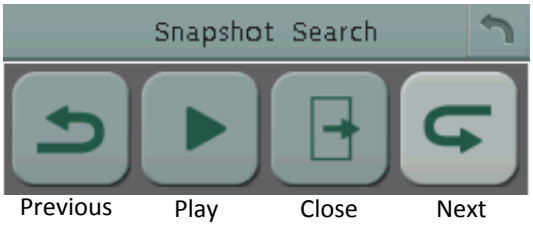


Figure 5-11

3. Click the **Previous** or **Next** buttons to display the previous / next snapshots.
4. Select a snapshot by clicking on the snapshot, the selected snapshot will be highlighted with a white frame.
5. Click the **Play** button to resume the video.
6. Click the **Close** button to close the Resume Playback Bar and then return to the Snapshot Search menu.

6. Configuration

The ENVR8304D-8CH and ENVR8304E-8CH can be configured through a series of menus on screen by using a **Mouse**, the supplied **IR Remote Control**, or the optional device **EKB500 keyboard**. The following operations are examples of using a Mouse. This chapter describes the functions and options of the Configuration Setting in the on-screen display (OSD) menus.

Right-click the mouse, the OSD Root Menu appears. Click the **Configuration** button , the following Configuration Menu displayed with 9 setup options appears.

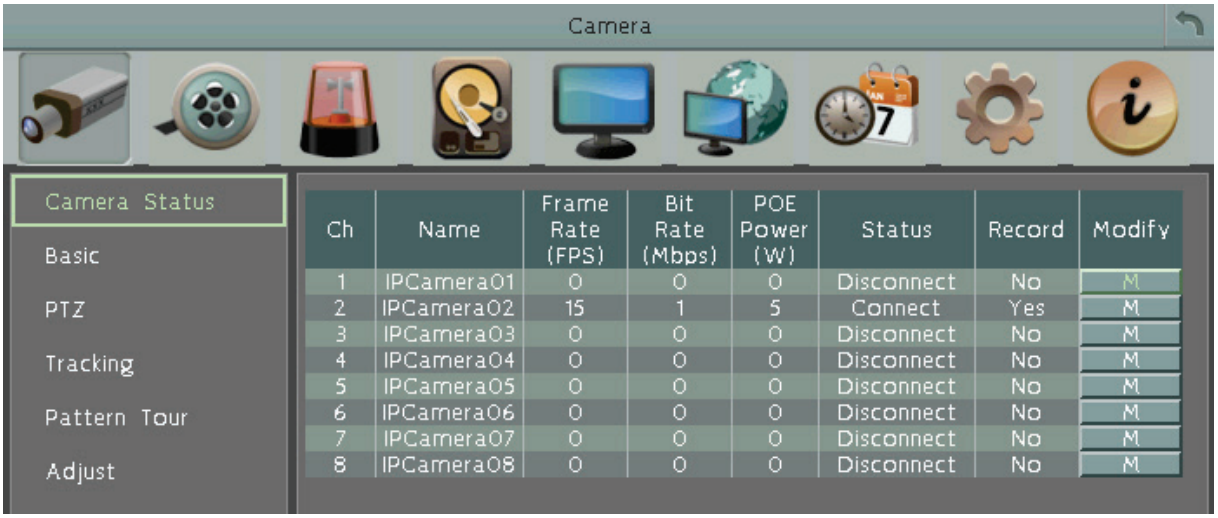


Figure 6-1

List of Configuration Options:

Please find the topic of interest by referring to the section prefixed to each option.

6.1 Camera	6.1.1 Camera Status 6.1.2 Basic 6.1.3 PTZ 6.1.4 Tracking 6.1.5 Pattern Tour 6.1.6 Adjust 6.1.7 eZ Hopper
6.2 Record & Playback	6.2.1 Record 6.2.2 Quick Archive 6.2.3 Playback
6.3 Event	6.3.1 Alarm 6.3.2 Connection Loss 6.3.3 Motion 6.3.4 Other
6.4 Disk	6.4.1 Disk 6.4.2 Lock/Format 6.4.3 RAID
6.5 Display Setting	6.5.1 Monitor OSD 6.5.2 M/T SEQ
6.6 Network	6.6.1 LAN & WAN 6.6.2 Email 6.6.3 DDNS 6.6.4 FTP 6.6.5 Alarm Server 6.6.6 Network Test
6.7 Schedule	6.7.1 Express Setup 6.7.2 Holidays 6.7.3 Schedule
6.8 System Setting	6.8.1 Date / Time 6.8.2 Daylight Saving Time 6.8.3 User Group 6.8.4 User Management 6.8.5 I/O Control 6.8.6 EKB200 6.8.7 Miscellaneous
6.9 System Information	6.9.1 Configuration 6.9.2 Log

6.1 Camera

If the NVR doesn't detect any IP cameras, the Basic, PTZ, Tracking, Pattern Tour and Adjust setting pages cannot be used. Therefore, make sure the IP cameras are properly connected to the NVR via the Smart Switch.

6.1.1 Camera Status

This page displays connected IP cameras' status and also allows users to modify the ID and Password of the IP cameras.

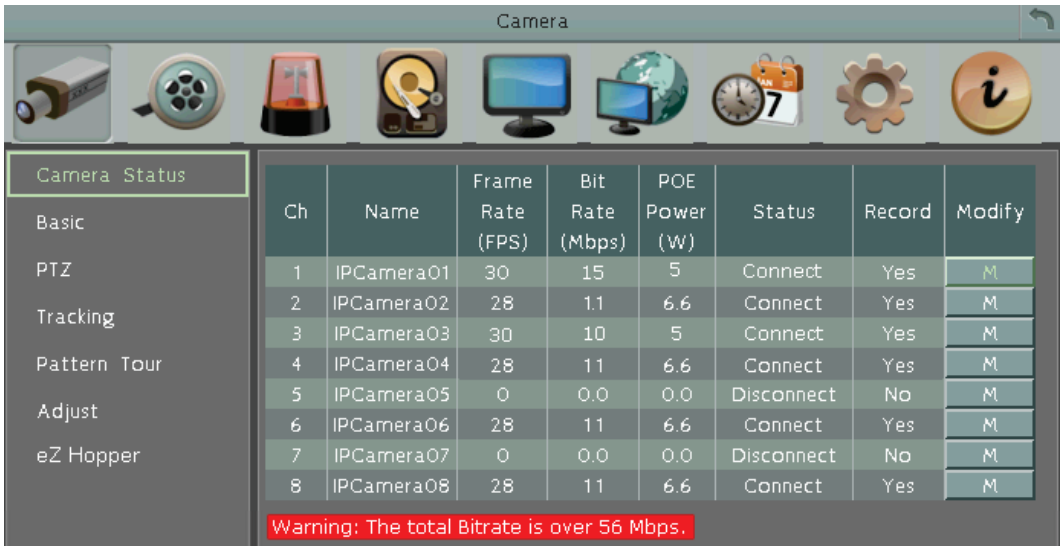


Figure 6-2

Channel: Displays the channel number.

Name: Shows the name of the connected IP camera.

Frame Rate: Shows the current frame rate of the connected IP camera.

Bit Rate: Shows the current Bit Rate of the connected IP camera. If the total bit rate is over 56 Mbps, it will show a warning at this setting page as above.

PoE Power: Shows the current Bit Rate of the connected IP camera.

Status: Shows the connection status.

Record: Shows the recording status.

Modify: Click to bring up the following window and you can modify the ID and Password of the connected IP camera.

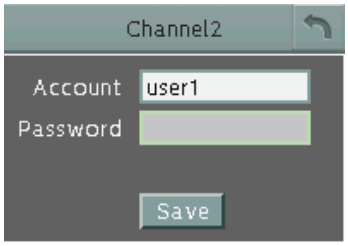


Figure 6-3

6.1.2 Basic

Figure 6-4

Channel Number: Select a desired channel for configuration.

Device Title: Enter a camera title.

Record Dual Stream: Select to enable or disable the dual streams recording function.

Record Mode: Select a recording mode from the drop-down list.

Normal+Event: Set all cameras to the Continuous and Event recording mode.

Event Only: Set all cameras to the Event only recording mode.

Record Audio: Check the box to enable audio recording on the NVR.

Note:
1. The Audio function is unavailable for Germany
2. The NVR provides a line-in RCA socket, therefore, an RCA microphone with a (built-in) amplifier and external power supply is required.

Frequency: Select **50hz** if you camera is using the PAL scanning system or **60hz** for the NTSC scanning system.

【Main / Sub Stream】 You can separately configure the settings for the Main and Sub Streams.

Resolution: Select a desired recording resolution.

Bit Rate Control: Select whether you want the stream to stream a **VBR (Variable Bit Rate)** or a **CBR (Constant Bit Rate)**.

Quality: If you use VBR, you can select an image quality of the camera.

Constant Bit Rate: If you use CBR, you can enter a desired bit rate (256~12,000 kbit) for each camera.

Normal Speed: Select a frame rate per second (FPS) for continuous recording. The frame rate is limited by the maximum total recording capacity of the NVR as allocated across all the installed cameras.

Event Speed: Select a frame rate per second (FPS) for continuous recording. The frame rate is limited by the maximum total recording capacity of the NVR as allocated across all the installed cameras.

Save: Click to add the camera and save the current settings.

6.1.3 PTZ

You can set up the Preset and Auto Pan settings in this page.

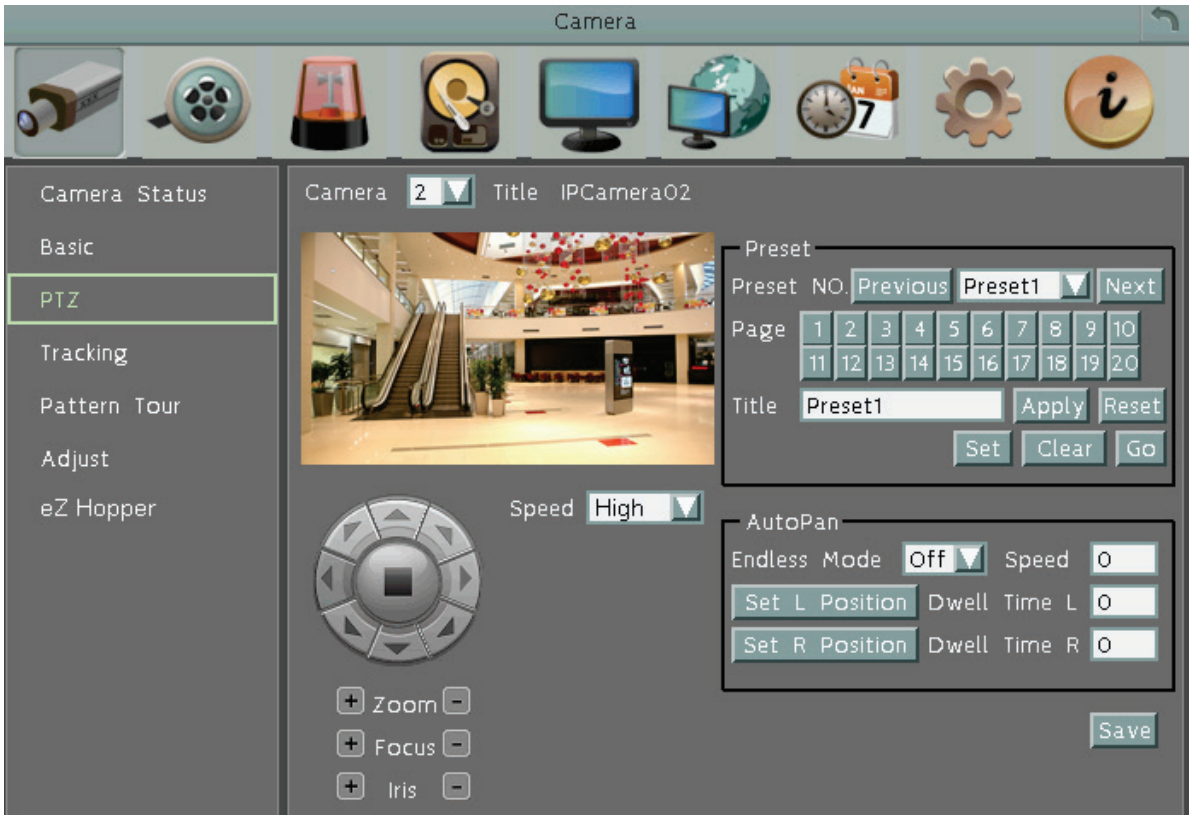


Figure 6-5

【Camera】: Select a PTZ camera.

【Speed】: Select a pan and tilt speed from the Speed drop-down list for the camera to move to the directions when you use the direction buttons during the configuration period

【PTZ Control Pad】:

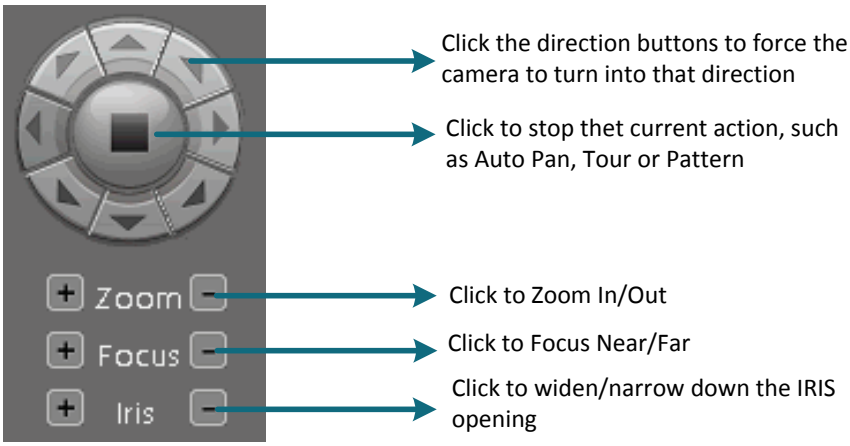

Zoom
Focus
Iris
Click the direction buttons to force the camera to turn into that direction
Click to stop thet current action, such as Auto Pan, Tour or Pattern
Click to Zoom In/Out
Click to Focus Near/Far
Click to widen/narrow down the IRIS opening

Figure 6-6

Preset: You can configure up to 192 preset positions in this field.

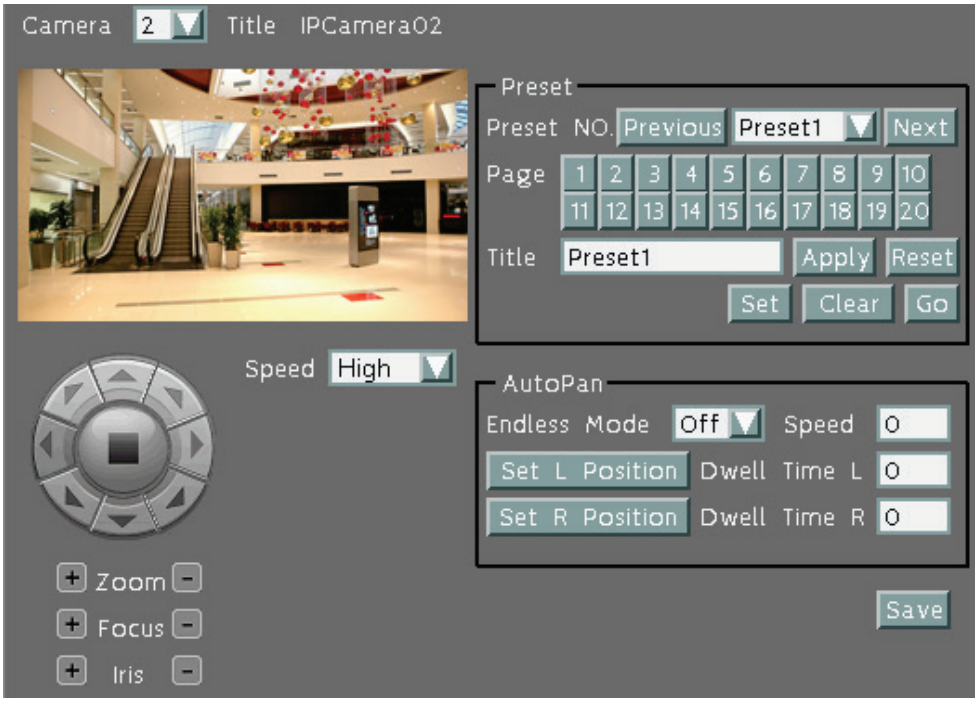


Figure 6-7

To set up a Preset Positions:

1. Adjust the camera view to a desired position using the direction button. You can select the pan / tilt speed from the **Speed** drop-down list for controlling the direction buttons. Adjust zoom, focus and Iris if necessary.
2. To set up the current camera view as a preset position, select a preset number from the **Preset No** drop-down list for the current camera view.
3. Optionally set up a title for this preset position in the **Title** field .Click **Apply** to save the title name or click **Reset** to reset the current changes.
4. Click **Set** to save the current position as the Preset Number you have selected.
5. Follow Step 1 to 4 to set up another preset position. You can click the **Next** button to go to the next page and then click the Preset No drop-down list to select a number. Or click on the number in the Page field to select a preset number.

To activate the Preset function on the PTZ Live View window, click the PTZ icon on the OSD Root Menu. Click the **Preset** button, click on the numeric buttons to select a Preset number and then click the **Go** button. The selected Preset position should be displayed on the camera view. Please refer to *4.1 PTZ* for detailed instructions.

Auto Pan: You can only configure one Auto Pan sequence. The configured Auto Pan (A to B Pan) sequence will always be numbered as “1”. The number “2” will always be an endless pan around the given (not preconfigured) X/Y tilt axis.

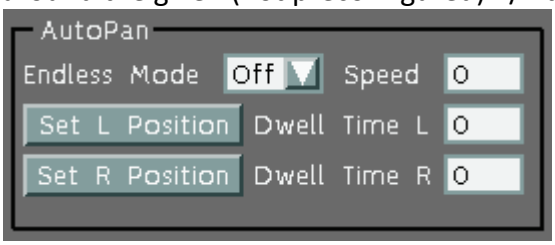


Figure 6-8

Endless Mode: The Endless Mode is always numbered as “99” in the PRESET function. If you select **On**, the Preset number “99” will be the 360° endless pan function; if you select **Off,** the Preset number “99” will be the preconfigured A to B Pan function. To use the function, go to PTZ live view page first. Click the **Preset** button and click the Preset number “99”. Finally, click **Go** to activate the Endless Mode.

To set up an Auto Pan Sequence:

1. Using the direction buttons to adjust the camera view to a desired position where you want to set up the position as the Left Position. You can select the pan / tilt speed from the **Speed** drop-down list for controlling the direction buttons. Adjust zoom, focus and Iris if necessary.
2. Click the **Set L Position** button to save the current position as the Left Position.
3. Follow Step 1 to set up the Right Position and then click the **Set R Position** to save the current position as the Right Position.
4. Enter a dwell time (1~99 seconds) for the Left and Right positions (the time that the camera will pause at each position).
5. Enter a speed (1~255) at which the camera will move during the Auto Pan sequence.
6. Click **Save** to save the settings.

To activate the configured Auto Pan on the PTZ Live View window, click the PTZ icon on the Menu Bar. Click the **Auto Pan** button, click “1” on the numeric buttons and then click the **Go** button. The camera will continuously move to the left and right positions which you have configured. Click “2” on the numeric buttons and then click the **Go** button will force the camera to pan 360° endlessly. To stop the Auto Pan function, click the **Stop** button on the PTZ Control panel.

6.1.4 Tracking

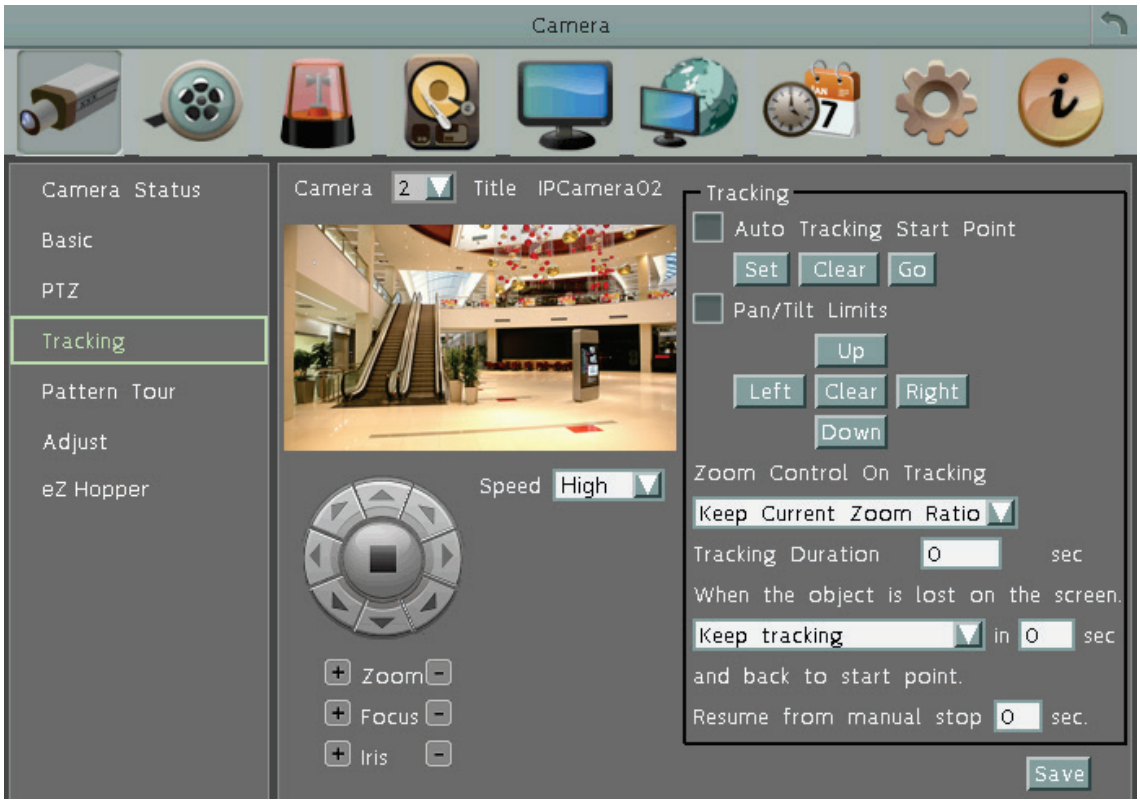


Figure 6-9

To set up the Auto Tracking function:

1. **Auto Tracking Start Point:** Check the box to enable a camera position to which the camera will return to after a tracking operation. Use the direction buttons to adjust the camera view to a desired position where you want to set up the position as the Auto Tracking Start Point. You can select the pan / tilt speed from the **Speed** drop-down list for controlling the direction buttons. Adjust zoom, focus and Iris if necessary. Click **Set** to set the position as the Auto Tracking Start Point.

   Note: If the user did not set up a start point or the start point is disabled, the camera will go back to track/monitor the initial point instead of the Auto Tracking Start Point, once the tracked object exits in the camera's field of view.

2. **Pan/Tilt Limit:** Check the box if you want to create a zone where the camera will track the movement inside the zone only. Before clicking the Upper/Lower/Right/Left buttons, use the direction buttons to adjust the camera view to a desired position where you want the camera to track the movement in that zone. You can select the pan / tilt speed from the **Speed** drop-down list for controlling the direction buttons. Adjust zoom, focus and Iris if necessary. Click the Upper/Lower/Right/Left buttons to set up the Pan/Tilt limits (Left and Right for the Pan limit; Upper and Lower for the Tilt limit).

Note: Please note that if enabling the **Pan/Tilt Limits** function, the position of the Start Point should be within the range of the **Pan/Tilt Limits**, or there will be a pop-up message showing "Setting error: Start Point is not inside Pan/Tilt Limits".

- **Zoom control on tracking:**
  Keep current zoom ratio: the current zoom ratio will stay fixed during the tracking process.
  Multi-step zoom function: the zoom ratio will change according to the distance of the object against the camera. When the object is moving further away, the camera will keep zooming in to track; on the other hand, when moving closer, the camera will zoom out to check whether it should track the object or not.
- **Tracking Duration:** User can set the tracking time duration of the camera (0~600 seconds). When the Tracking Duration is up, the camera will return to the Start Point. The function is used to prevent the camera from tracking an object which is intentionally set to lure the camera away.
- **When the object is lost on the screen:** User can select a tracking mode when the object is lost on the screen. The options are:
  Keep tracking: The camera will stop at the current position and wait for another moving object in the camera's field of view. Then, the camera will track the new object without changing zoom ratio.
  Zoom out and look for a new object: The camera will zoom out at the current position immediately for expanded the field of view and restart tracking a new moving object appearing in the camera's field of view.
  Stop tracking and zoom out: The camera will stop auto tracking and stay at the current position. Then, the camera will zoom out for expanded the field of view.
- **In sec and Back to Start Point:** Set up a period of time for the camera to stay at the current position before returning to the Start Point (0 is returning to Start Point without any waiting).
- **Resume from manual stop:** The function is used to set up the Auto Tracking restart time (0~600 seconds). If user manually operates the PTZ function during auto tracking process, the auto tracking function will stop. When the manual operation ceases, the camera will resume to "Auto Tracking Start Point" after a given period of time. Setting of value 0 indicates do not restart.

Note: In the on-going auto tracking process after object is identified, the PTZ function keeps the moving object in the center of the screen. But the PTZ function may stop if the object moves too slow and stays in center of the screen too long. In case like this the auto tracking may incorrectly assume the object is lost and ends the tracking process.

6.1.5 Pattern Tour

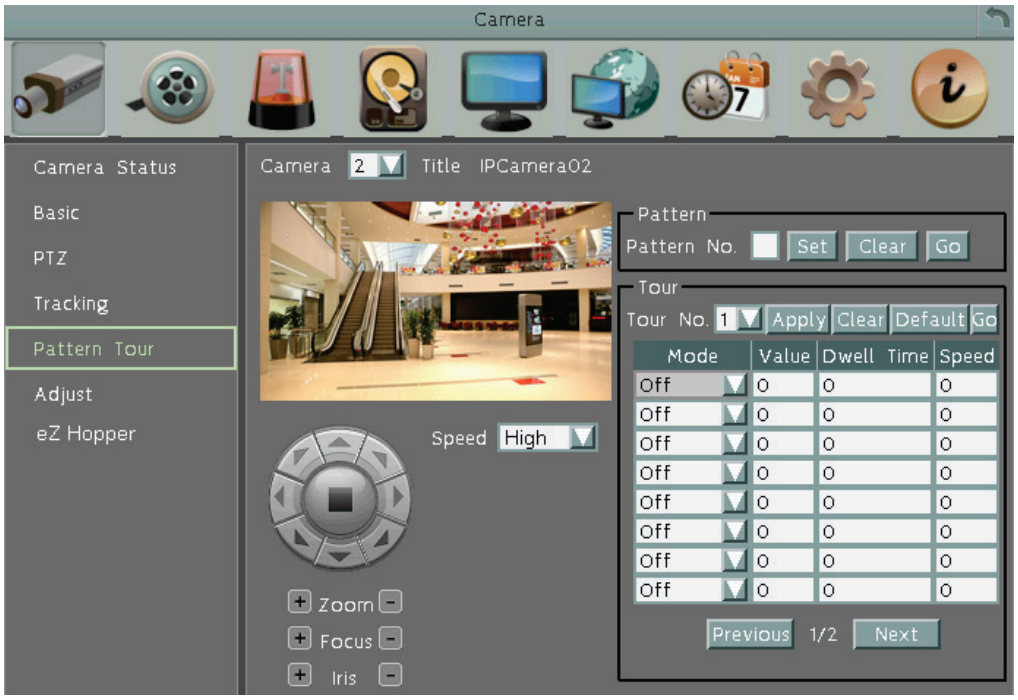


Figure 6-10

Pattern: You are given 90 seconds to move the camera (via the PTZ buttons) to different positions (and different zoom / focus / Iris positions). The camera then saves that sequence under the Pattern No. you've selected. Up to 4 Patterns can be configured.

To set up a Pattern Sequence:

1. Select a pan and tilt speed from the **Speed** drop-down list for the camera to move to the directions when you use the direction buttons during the configuration period.
2. Select a pattern number from the **Pattern No** drop-down list.
3. Click the **Set** button to start the 90-second configuration period. Use the direction / zoom / focus / Iris buttons to move the camera in the desired sequence.
4. Click the **Complete** button again to end the configuration.

Click **Clear** can void the configuration for the entered Pattern No. Click **Go** to view/test the configured Pattern sequence.

To activate the Pattern function on the PTZ Live View window, click the PTZ icon on the Menu Bar. Click the **Pattern** button, click on the numeric buttons to select a Pattern number and then click the **Go** button. The camera will move to the positions in the Pattern sequence you have configured. To stop the Pattern function, click the **Stop** button on the PTZ Control panel. Please refer to *4.1 PTZ* for detailed instructions.

Tour: You can combine up to 16 preconfigured camera positions and patterns into one long sequence. Up to 16 Tour sequences can be set up.

To set up a Pattern Sequence:

1. Select a number from the **Tour No** drop-down list.
2. To set up the first position for Tour No.1, select **OFF**, **Preset** or **Pattern** in the Mode field.

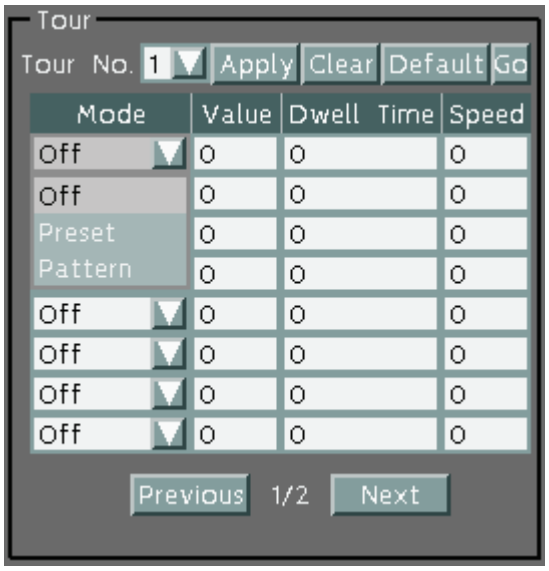


Figure 6-11

3. Enter a Preset No. or Pattern No. in the **Value** field.
4. Enter a dwell time (1~99 seconds) in the **Dwell Tour** field that the Tour will pause at a Preset position or after a Pattern sequence.
5. Enter a speed (1~255) at which the camera will move to the Preset position or first point of the Pattern sequence.
6. Follow Step 3 to 5 to configure up to 16 positions for Tour No.1.
7. To configure another Tour sequences, select a number from the **Tour No** drop-down list and follow Step 3 to 6 to configure up to 16 positions for the selected Tour number.
8. Click **Apply** to apply the settings. Click **Clear** to clear the current settings for the selected Tour No.; click **Default** to set the Tour Sequence to Default setting; click **Go** to view/test the configured Tour sequence.

To activate the Tour function on the PTZ Live View window, click the PTZ icon on the Menu Bar. Click the **Tour** button, click on the numeric buttons to select a Tour number and then click the **Go** button. The camera will move to the positions in a long sequence you have configured. To stop the Pattern function, click the **Stop** button on the PTZ Control panel. Please refer to *4.1 PTZ* for detailed instructions.

6.1.6 Adjust

Figure 6-12

Camera: Select a desired camera for adjusting the following settings.

Ratio: Select 4:3 or 16:9 display aspect ratio of a camera, and its video will be displayed in 4:3 or 16:9 format on that channel screen. Please refer to *2.3.4 Display Aspect Ratio* for more details.

Connected Channel: Check the box to enable the connection between the camera and the NVR. If the box is unchecked, the system will disconnect the camera and stop recording.

Mask Channel: Check the box to mask the camera's live view on the screen, but the recording function is still on.

Note: Whether the following functions marked with a "*" will be enabled or not depends on the connected IP camera. If the IP camera doesn't have the any one of these functions, the function will not be enabled. The setting options will also vary according to the IP cameras you selected. For more details, please refer to your IP camera's user's manual.

* **Profile Setting:** Select **Day Mode** or **Night Mode.** It is designed for user to easily have a best image quality of the camera in the daytime and night time.

* **Profile Mode:** Select a desired profile mode (Vivid/High Contrast, Standard, More Detail and User Define) to adjust image quality.

* **Flicker:** Check the box to enable the Flicker function. Please enable this function only if flicker artifacts are observed.

* **【Exposure Settings】** This setting is used to adapt to the amount or type of light used by the camera.

* **Mode:**
  - **ALC (Shutter Priority):** Selecting ALC (Automatic Light Control) allows the camera circuitry to either take bright spots more into consideration (peak), bringing out detail in bright areas, or less into consideration (average) bringing out detail in shadows.
  - **AES (Iris Priority):** Selecting AES (Auto Electronic Shutter) disables the Shutter setting below this setting. In this mode, the camera measures the light level and decides whether it needs more or less light and then automatically adjusts the shutter speed accordingly. You can further adjust the Iris (P-Iris) value.
  - **Auto:** Selecting Auto for the camera to automatically adjust the Iris and Shutter based on the measured light level.

* **Shutter:** If enabled, this setting lets you set the shutter speed yourself (measured in fractions of a second).

* **Flickerless:** The function is only activated if you select **Auto** in the Mode field. Choose between OFF, 50HZ, 60HZ, 50HZ (High Luminance) or 60HZ (High Luminance).

Brightness: Move the bar to adjust the brightness.

Contrast: Move the bar to adjust the contrast. (The function can only be used when the camera has the contrast function)

Color: Move the bar to adjust the color.

Sharpness: Move the bar to adjust the sharpness.

Apply To: Click the button to apply the same settings to the desired cameras.

Save: Click to save the settings.

6.1.7 eZ Hopper

You can just use one mouse to control up to 16 DVRs/NVRs in the same LAN network by enabling the *eZ* Hopper function.

Note: Before using this function, you need to set up all the monitors to be the same resolution, please refer to *6.5.1 Monitor OSD*.

Figure 6-13

Set up one DVR or NVR to be the **Main Server**, and the rest to be the **Sub Servers**. Then, you just need to connect a mouse to the **Main Server**, and you will be able to move its cursor across all the connected monitors of the **Main** and **Sub Servers** and to control their OSD menus respectively.

Follow the steps below to set up the *eZ* Hopper function:

For the Main Server:

1. Select **Main Server** in the **Mode** drop-down list, and check the **Enable** box.

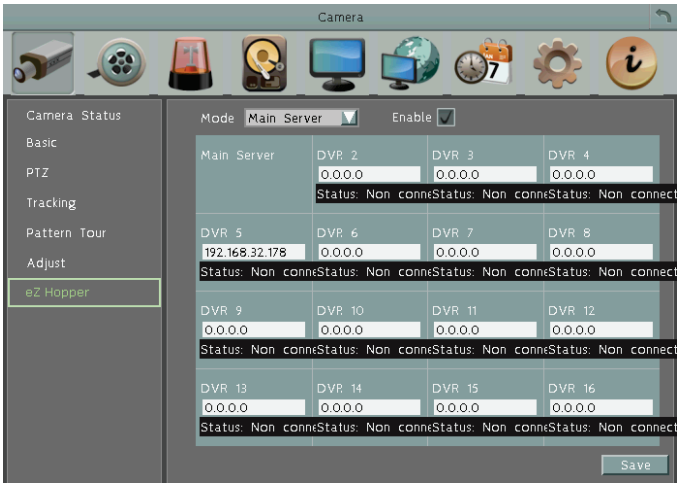


Figure 6-14

2. The position of each device on the OSD layout represents the physical positions of your monitors which you should arrange and place in the setup environment.

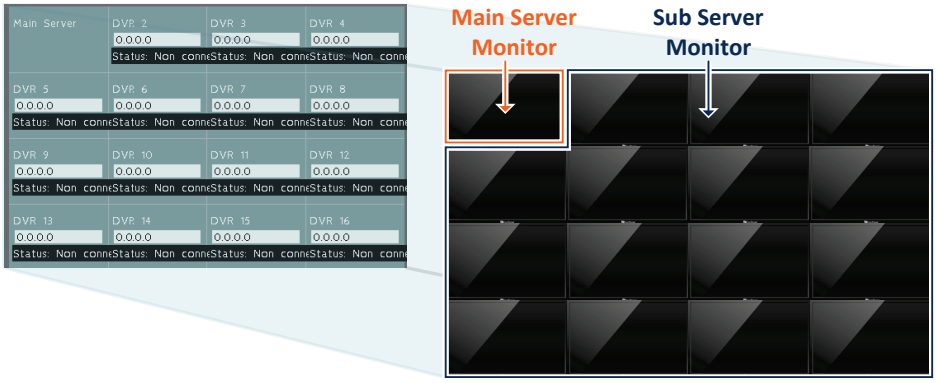


Figure 6-15

3. Click an IP address field to enter the **IP address** of a Sub Server and the first Sub Server must be adjacent to Main Server on the OSD layout (DVR 2 or DVR 5), or it won't work.

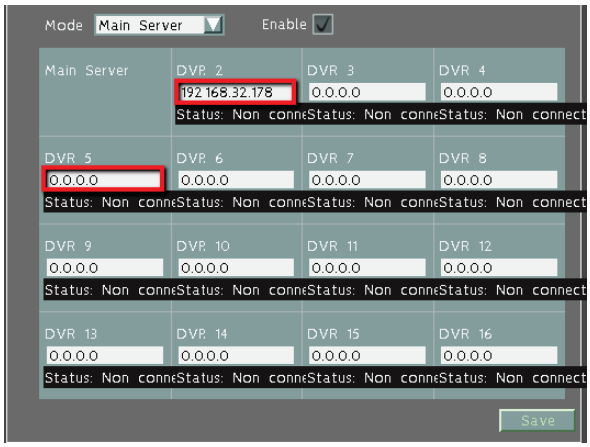


Figure 6-16

4. Set up the rest of the Sub Servers by entering their IP addresses, and please note that the Sub Servers must be adjacent to one another on the layout, or it won't work.

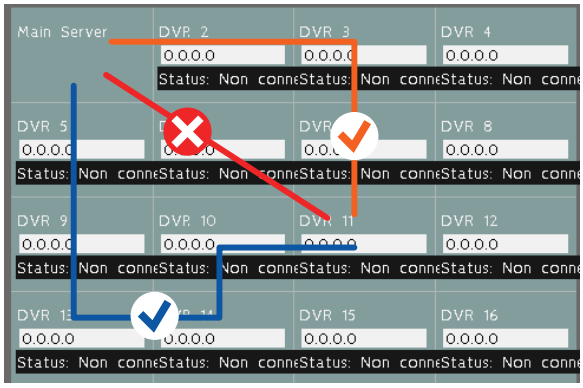


Figure 6-17

5. Click **Save** to save the setting.

For the Sub Server:

1. Select Sub Server in the **Mode** drop-down list, and check the **Enable** box.

Figure 6-18

2. Enter the IP address of the Main Server, and click **Save**.
3. When the message pops up as below, the eZ Hopper function is enabled. So, you can now use the mouse connected to the Main Server to control this Sub Server's OSD.

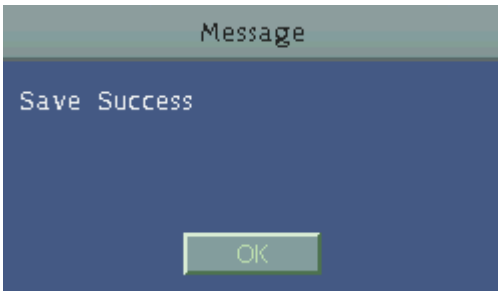


Figure 6-19

4. Follow the above 3 steps to set up the rest Sub Servers.

6.2 Record & Playback

You can configure the basic recording settings on the hard disk. You can also configure the settings for Quick Archive and Quick Playback.

6.2.1 Record

Figure 6-20

Record Overwrite: Check the box to overwrite the hard disk when it is full. Note that unless this box is checked, or the NVR will stop recording when the hard disk is full. The use of record overwrite is strongly recommended. If you do not use this feature, please be sure to enable the Event setting for Disk Full for notification (see *6.3.4 Other*).

Schedule Record: Check the box to record by the schedule. Please see *6.7 Schedule* for more details.

Record Status Relay Output: Select a number to monitor the recording status of the selected alarm relay. The recording status of the selected alarm relay will be transmitted to the alarm output device.

6.2.2 Quick Archive

Figure 6-21

You can quickly archive all the recordings to the USB storage device

1. Plug an USB storage device before quick archiving.
2. Click the **Quick Archive Interval** drop-down list and select an interval time (1, 5, 10, 15, 20, 30 or 60 minutes). For example, if you set up 60 minutes for the Archive Interval, the NVR will archive the recordings 60 minutes ago from the current time to the storage device.
3. Click the **Save** button to save the setting.
4. Go to the OSD Root Menu, click the **Quick Archive** button and then the Quick Archive process begins. The EFPlayer software will also be copied to the storage device automatically.

Note: If the space of the storage is insufficient, the copies will end at the time when the storage space is full.

6.2.3 Playback

Figure 6-22

Quick Playback: Check the box to enable the configured playback start time in the below field.

Playback from X seconds ago: Set up a time between 60 and 3600 seconds for the playback start time. When you click the **Playback** button on the DSD Root menu, the system will play back the recordings start from the setup time.

6.3 Event

You can configure the Alarm, Connection Loss, Motion and Other settings in this menu.

6.3.1 Alarm

Figure 6-23

Alarm: Select an Alarm input number from 1 to 2.

Enable: Check the box to enable the Alarm trigger function for the selected alarm input.

Log: Check the box to record alarm events to log data.

Pre-alarm Record: Check the box to start copying the recordings to the hard disk from 5 seconds before the alarm event occurs. Note that the pre-alarm recording rate will follow the **Normal Speed** configured in the earlier section (see *6.1.2 Basic*).

Buzzer: Check the box to enable the buzzer when an alarm event is triggered.

Email Notify: Check the box to send email notification with a snapshot file when an alarm event is detected. Email operation requires valid email entered in the Email setup menu (see *6.6.2 Email*).

Network Alarm: Check the box to send out a network alarm to a client PC when an alarm event occurs. This feature works with EverFocus' CMS software. You will need to configure

the Alarm Server for the NVR to send network alarms to the client PC (see *6.6.5 Alarm Server*).

Auto Lock: Check the box and the events will be recorded in a write protected segment of the hard disk (will not be overwritten). The NVR will lock a period of time when the alarm occurs. The length of the time depends on NVR setting (see *6.4.2 Lock / Format*).

FTP Upload: Check the box to enable uploading recordings to the FTP server function. To setup the FTP server, please refer to *6.6.4 FTP*.

FTP Upload File Type: Select MP4 file type to upload 10-second videos to FTP server; select JPEG file type to upload snapshots to the FTP server.

Alarm Output: Select an alarm output number. When an alarm is triggered, the signal will be transmitted through the selected alarm output relay.

Output Type: Select an output type when an alarm is triggered.

Timeout: Select this option and then set up the Timeout Duration in the field below, the alarm output will last for the setup duration time (10 ~ 150 seconds).

Permanent: Alarm will remain active until the user presses the “Enter” key on the IR Remote Control or resets the alarm remotely.

Transparent: Alarm output remains as long as the alarm input is active.

Trans + Timeout: Alarm output continues until event ends, then continues for the setup duration time (10 ~ 150 seconds).

Timeout Duration: This function only appears when you select **Timeout** or **Trans + Timeout** options in the Output Type drop-down list. Select a duration time for the motion event. The alarm output will last for the setup duration time between 1 and 150 seconds.

Main Monitor: Select **Full Screen** to force the camera associated with the selected alarm number to display full screen on the Main Monitor. The full screen camera view will last according to the Output Type selected in the field above.

Record: Select a camera to start recording when the associated alarm number is triggered.

Input Type: Select an input type when the selected alarm number is triggered. The options include N.O. and N.C.

Active Camera: This function is for associating an alarm trigger with a specific camera. For example, if you set up an external motion detector near Camera 2, you can select Camera 2 in this field. The alarm will be associated with this camera for full screen display, event logging and PTZ actions.

PTZ: If the Active Camera selected above is a PTZ camera, you can further set up the PTZ actions in this field.

Apply To: Click the button to apply the same settings to the desired cameras.

6.3.2 Connection Loss

Figure 6-24

Camera: Select a camera to be configured.

Enable: Check the box to enable the Video Loss event settings for the selected camera.

Log: Check the box to record video loss events to log data.

Buzzer: Check the box to enable the buzzer when a video loss event is triggered.

Email Notify: Check the box to send email notification when a video loss event is detected. Email operation requires valid email entered in the Email setup menu (see *6.6.2 Email*).

Network Alarm: Check the box to send out a network alarm to a client PC when video loss event occurs. This feature works with EverFocus' CMS software. You will need to configure the Alarm Server for the NVR to send network alarms to the client PC (see *6.6.5 Alarm Server*).

Alarm Output: Select an alarm output number. When an alarm is triggered, the signal will be transmitted through the alarm output relay.

Output Type: Select an output type when an alarm is triggered.

Timeout: Select this option and then set up the Timeout Duration in the field below, the alarm output will last for the setup duration time (10 ~ 150 seconds).

Permanent: Alarm will remain active until the user presses the “Enter” key on the IR Remote Control or resets the alarm remotely.

Transparent: Alarm output remains as long as the alarm input is active.

Trans + Timeout: Alarm output continues until event ends, then continues for the setup duration time (10 ~ 150 seconds).

Timeout Duration: This function only appears when you select **Timeout** or **Trans + Timeout** options in the Output Type drop-down list. Select a duration time for the motion event. The alarm output will last for the setup duration time between 10 and 150 seconds.

Apply To: Click the button to apply the same settings to the desired cameras.

6.3.3 Motion

Figure 6-25

Camera: Select a camera to be configured.

Enable: Check the box to enable the Motion Event settings for the selected camera.

Log: Check the box to record motion events to log data.

Pre-alarm Record: Check the box to start copying the recordings to the hard disk from 5 seconds before the motion event occurs. Note that the pre-alarm recording rate will follow the **Normal Speed** configured in the above section (see *6.1.2 Basic*).

Buzzer: Check the box to enable the buzzer when a motion event is triggered.

Email Notify: Check the box to send email notification when a motion event is detected. Email operation requires valid email entered in the Email setup menu (see *6.6.2 Email*).

Network Alarm: Check the box to send out a network alarm to a client PC when motion occurs. This feature works with EverFocus' CMS software. You will need to configure the Alarm Server for the NVR to send network alarms to the client PC (see *6.6.5 Alarm Server*).

Auto Lock: Check the box and the events will be recorded in a write protected segment of the hard disk (will not be overwritten). The NVR will lock a period of time when the alarm occurs. The length of the time depends on NVR setting (see *6.4.2 Lock / Format*).

FTP Upload: Check the box to enable uploading recordings to the FTP server function. To setup the FTP server, please refer to *6.6.4 FTP*.

FTP Upload File Type: Select MP4 file type to upload 10-second videos to FTP server; select JPEG file type to upload snapshots to the FTP server.

Alarm Output: Select an alarm output relay. When an alarm is triggered, the signal will be transmitted through the selected alarm output relay.

Output Type: Select an output type when an alarm is triggered.

Timeout: Select this option and then set up the Timeout Duration in the field below, the alarm output will last for the setup duration time (10 ~ 150 seconds).

Permanent: Alarm will remain active until the user presses the “Enter” key on the IR Remote Control or resets the alarm remotely.

Transparent: Alarm output remains as long as the alarm input is active.

Trans + Timeout: Alarm output continues until event ends, then continues for the setup duration time (10 ~ 150 seconds).

Timeout Duration: This function only appears when you select **Timeout** or **Trans + Timeout** options in the Output Type drop-down list. Select a duration time for the motion event. The alarm output will last for the setup duration time between 10 and 150 seconds.

Main Monitor: Select **Full Screen** to force the camera which detects motion to display full screen on the Main Monitor. The full screen camera view will last according to the Output Type selected in the field above.

Edit Motion Grid: Press the button to bring up the Motion Setting menu. To edit the motion grids, please refer to the instructions later in this section.

Apply To: Click the button to apply the same settings to the desired cameras.

To Edit the Motion Grids:

1. Click the Edit Motion Grid button, the Motion Setting menu appears.

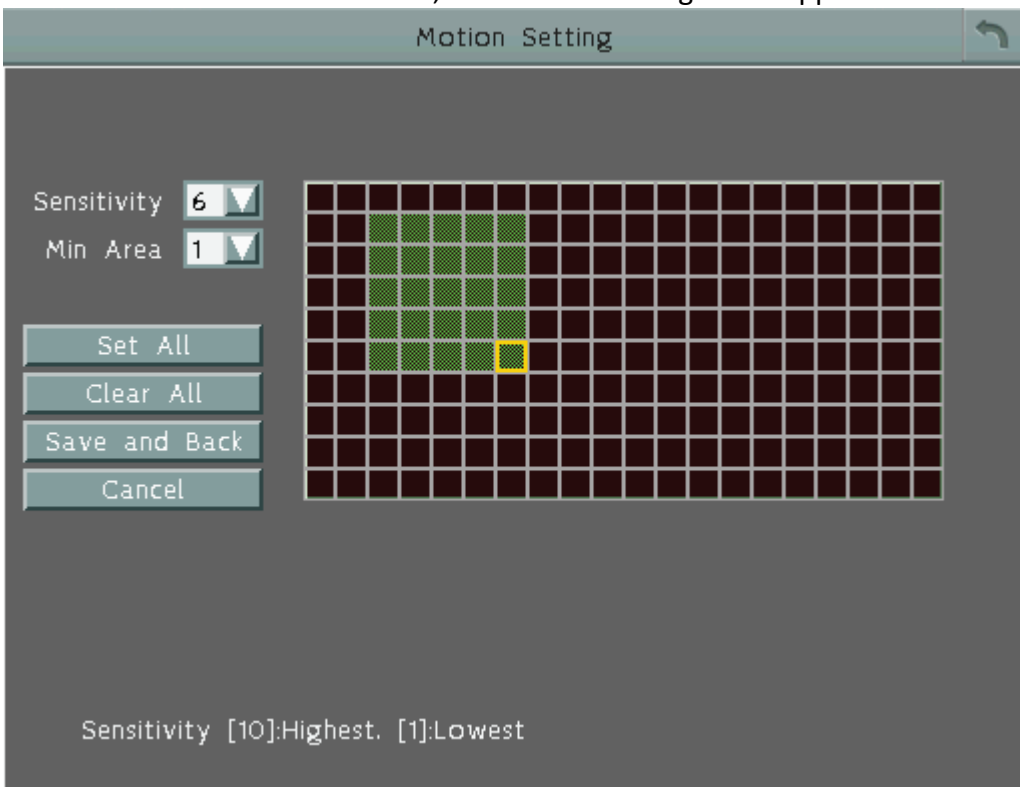


Figure 6-26

2. Click on the image and the grid will be displayed.
3. To set up a motion area, drag a rectangle with your mouse (from top to bottom / upper- left to lower-right). The selected areas will be highlighted in green (see image below).
4. To delete a motion area, drag a rectangle with your mouse (from bottom to top / lower-right to upper-left).
5. Follow Step 3 to set up multiple motion areas if necessary.
6. Sets up the Sensitivity, Min Area and Motion Delay for the motion grids.
   Sensitivity: Sets up the motion sensitivity for the grids. The larger the number, the higher the sensitivity.
   Min Area: This function is designed to prevent false detections caused by small objects. If you select 2, only the object size larger than 2-grid size can be detected.
7. Click the **Save and Back** button to save the settings and then return to the Motion menu.

6.3.4 Other

You can configure the event settings and enable the Buzzer or Email alert for notifications. The event options include: **Fan Failure**, **Disk Temperature**, **Disk Failure**, **Disk Full**, **Disk Off**, **Power Loss** and **Network Loss**.

6.3.4.1 Fan Failure

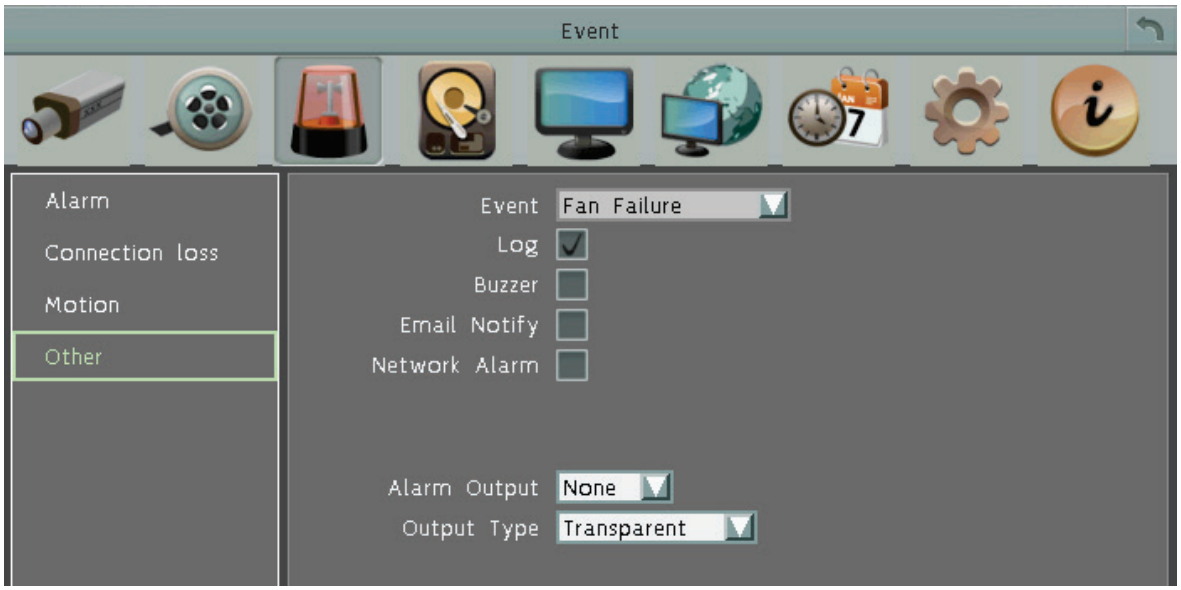


Figure 6-27

Log: Check the box to record alarm events to log data.

Buzzer: Check the box to enable buzzer when fan is not working.

Email Notify: Check the box to send email notification when an alarm event is detected. Email operation requires valid email entered in the Email setup menu (see *6.6.2 Email*).

Network Alarm: Check the box to send out a network alarm to a client PC when an alarm event occurs. This feature works with EverFocus' CMS software. You will need to configure the Alarm Server for the NVR to send network alarms to the client PC (see *6.6.5 Alarm Server*).

Alarm Output: Select an alarm output number. When an alarm is triggered, the signal will be transmitted through the selected alarm output relay.

Output Type: Output action will be Transparent and cannot be changed (alarm output remains as long as the alarm condition is active).

6.3.4.2 Disk Temperature

Figure 6-28

Log: Check the box to record alarm events to log data.
Buzzer: Check the box to enable buzzer when System / Hard Disk's (HD) temperature is over the "Temp. Warning Limit".
Email Notify: Check the box to send email notification when system / Hard Disk's (HD) temperature is over the "Temp. Warning Limit". Email operation requires valid email entered in the Email setup menu (see *6.6.2 Email*).
Network Alarm: Check the box to send out a network alarm to a client PC. This feature works with EverFocus' CMS software. You will need to configure the Alarm Server for the NVR to send network alarms to the client PC (see *6.6.5 Alarm Server*).
Stop Recording: Check box to stop recording when System / HD's temperature is over the "Temp. Warning Limit".
Temp. Warning Limit: Sets the trigger temperature for System / HD Temperature event actions. Choose between 45°C /113°F and 70°C /158°F.
Alarm Output: Select an alarm output number. When an alarm is triggered, the signal will be transmitted through the selected alarm output relay.
Output Type: Output action will be Transparent and cannot be changed (alarm output remains as long as the alarm condition is active).

6.3.4.3 Disk Failure

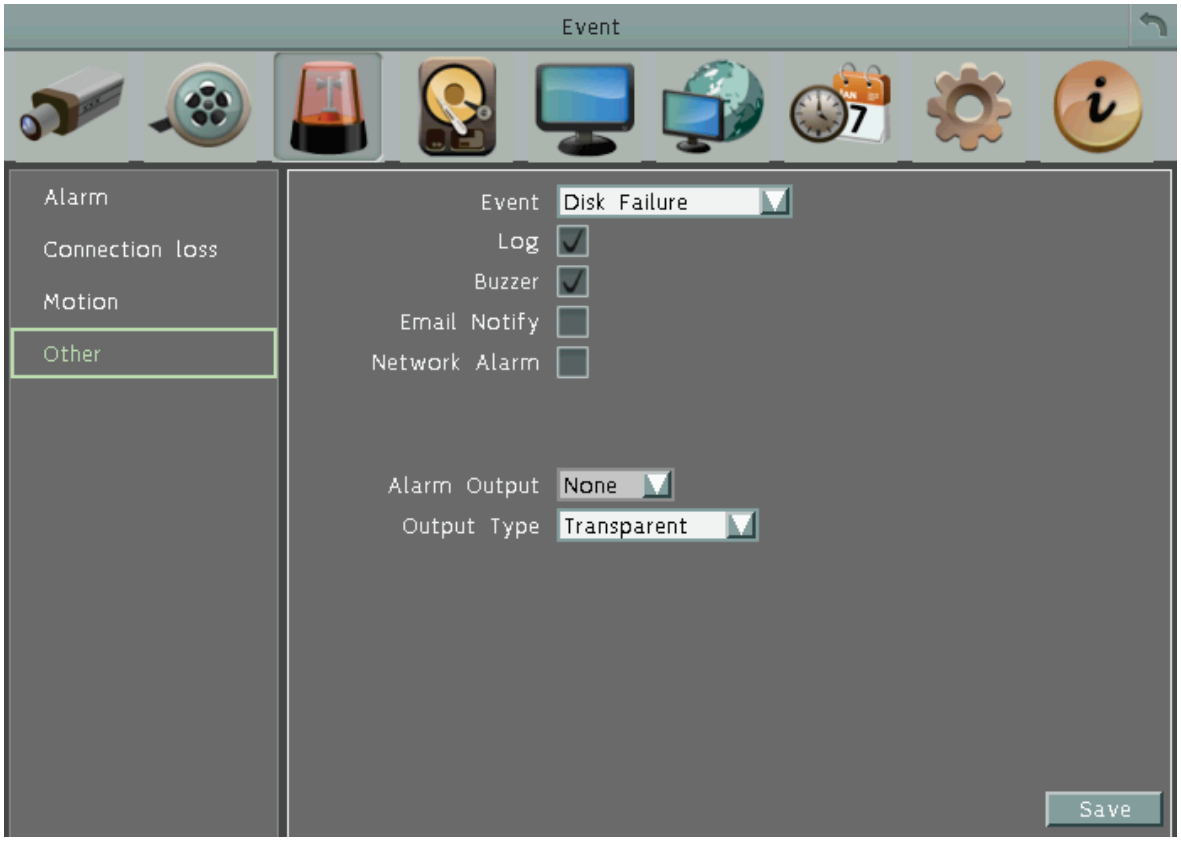


Figure 6-29

Log: Check the box to record alarm events to log data.

Buzzer: Check the box to enable buzzer when Hard Disk (HD) fails.

Email Notify: Check the box to send email notification when HD fails. Email operation requires valid email entered in the Email setup menu (see *6.6.2 Email*).

Network Alarm: Check the box to send out a network alarm to a client PC when HD fails. This feature works with EverFocus' CMS software. You will need to configure the Alarm Server for the NVR to send network alarms to the client PC (see *6.6.5 Alarm Server*).

Alarm Output: Select an alarm output number. When an alarm is triggered, the signal will be transmitted through the selected alarm output relay.

Output Type: Output action will be Transparent and cannot be changed (alarm output remains as long as the alarm condition is active).

6.3.4.4 Disk Full

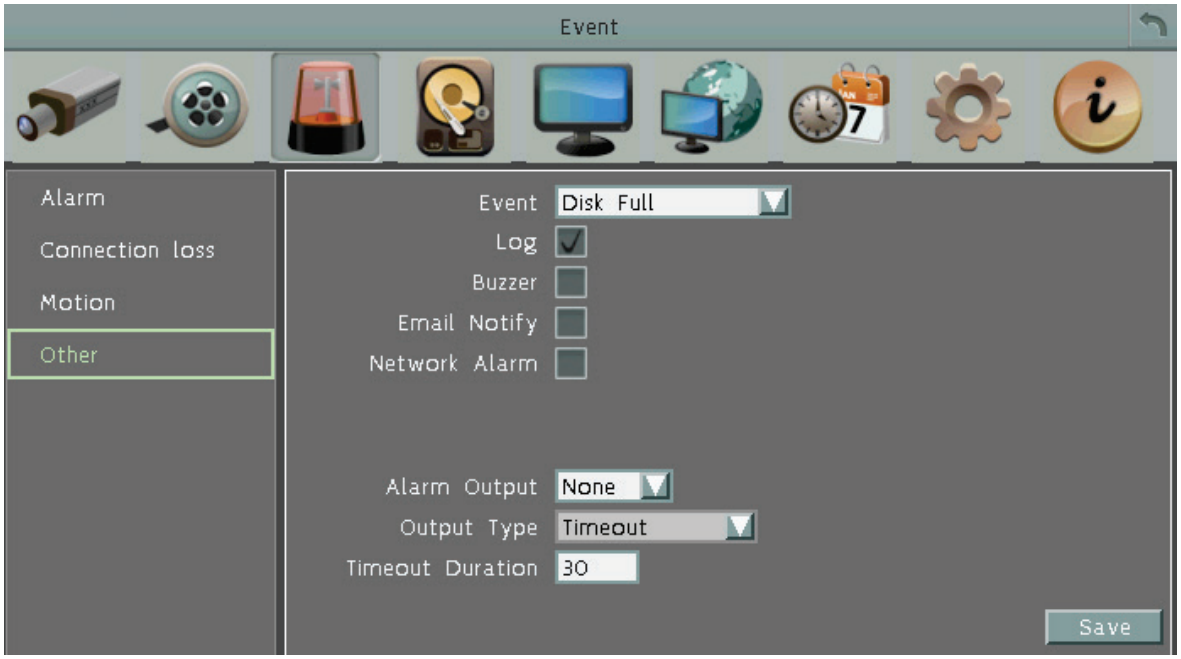


Figure 6-30

Log: Check the box to record alarm events to log data.
Buzzer: Check the box to enable buzzer when HD is full.
Email Notify: Check the box to send email notification when HD is full. Email operation requires valid email entered in the Email setup menu (see *6.6.2 Email*).
Network Alarm: Check the box to send out a network alarm to a client PC when HD is full. This feature works with EverFocus' CMS software, including PowerCom and PowerVideo Plus. You will need to configure the Alarm Server for the NVR to send network alarms to the client PC (see *6.6.5 Alarm Server*).
Alarm Output: Select an alarm output number. When an alarm is triggered, the signal will be transmitted through the selected alarm output relay.
Output Type: Select an output type when HD is full.

Timeout: Select this option and then set up the Timeout Duration in the field below, the alarm output will last for the setup duration time (10 ~ 150 seconds).
Permanent: Alarm will remain active until the user presses the "Enter" key on the IR Remote Control or resets the alarm remotely.
Transparent: Alarm output remains as long as the alarm input is active.
Trans + Timeout: Alarm output continues until event ends, then continues for the setup duration time (10 ~ 150 seconds).

Timeout Duration: This function only appears when you select **Timeout** or **Trans + Timeout** options in the Output Type drop-down list. Select a duration time for the event. The alarm output will last for the setup duration time between 10 and 150 seconds.

6.3.4.5 Disk Off

Figure 6-31

Buzzer: The buzzer will activate when fan is not working.

Email Notify: Check the box to send email notification when Hard Disk (HD) is off. Email operation requires valid email entered in the Email setup menu (see *6.6.2 Email*).

Network Alarm: Check the box to send out a network alarm to a client PC when HD is off. This feature works with EverFocus' CMS software. You will need to configure the Alarm Server for the NVR to send network alarms to the client PC (see *6.6.5 Alarm Server*).

Alarm Output: Select an alarm output number. When an alarm is triggered, the signal will be transmitted through the selected alarm output relay.

Output Type: Select an output type when HD is off.

Timeout: Select this option and then set up the Timeout Duration in the field below, the alarm output will last for the setup duration time (10 ~ 150 seconds).

Permanent: Alarm will remain active until the user presses the "Enter" key on the IR Remote Control or resets the alarm remotely.

Transparent: Alarm output remains as long as the alarm input is active.

Trans + Timeout: Alarm output continues until event ends, then continues for the setup duration time (10 ~ 150 seconds).

Timeout Duration: This function only appears when you select **Timeout** or **Trans + Timeout** options in the Output Type drop-down list. Select a duration time for the event. The alarm output will last for the setup duration time between 10 and 150 seconds.

6.3.4.6 Power Loss

Figure 6-32

Log: Check the box to record alarm events to log data.

Email Notify: Check the box to send email notification when power has been restored. Email operation requires valid email entered in the Email setup menu (see *6.6.2 Email*).

Network Alarm: Check the box to send out a network alarm to a client PC when power has been restored. This feature works with EverFocus' CMS software. You will need to configure the Alarm Server for the NVR to send network alarms to the client PC (see *6.6.5 Alarm Server*).

Note: As alarms and emails cannot be transmitted without power, the log entry is made when power is restored, and any notifications cannot be made until that time.

6.3.4.7 Network Loss

Figure 6-33

Log: Check the box to record alarm events to log data.

Buzzer: Check the box to enable buzzer when network is lost.

Alarm Output: Select an alarm output number. When an alarm is triggered, the signal will be transmitted through the selected alarm output relay.

Output Type: Select an output type when the network is lost.

Timeout: Select this option and then set up the Timeout Duration in the field below, the alarm output will last for the setup duration time (10 ~ 150 seconds).

Permanent: Alarm will remain active until the user presses the "Enter" key on the IR Remote Control or resets the alarm remotely.

Transparent: Alarm output remains as long as the alarm input is active.

Trans + Timeout: Alarm output continues until event ends, then continues for the setup duration time (10 ~ 150 seconds).

Timeout Duration: This function only appears when you select **Timeout** or **Trans + Timeout** options in the Output Type drop-down list. Select a duration time for the event. The alarm output will last for the setup duration time between 10 and 150 seconds.

Note: This function only checks the physical connection (link) to the network. Any network behavior that blocks data connectivity (blocked ports, IP addressing errors, etc.) is not detected by this function.

6.4 Disk

The Disk menu is used to review the NVR's hard drive settings and status. No value in this menu can be configured by the operator.

6.4.1 Disk

Figure 6-34

Record Time (Start): Shows the earliest recording time of the NVR.

Record Time (End): Shows the latest or most current time on the NVR.

Disk: Select a disk number.

Health Status: Displays the current status of the selected disk.

Disk Temperature: Displays the current temperature of the selected disk.

Disk Size (Total): Shows the total space of the selected disk.

Disk Size (Usage): Shows the used space of the selected disk.

6.4.2 Lock / Format

Figure 6-35

Maximum Lock (%): Sets the maximum percentage of the hard disk space reserved for Locked Event Recordings. To set up the Locked Event Recordings, please select the **Auto Lock** item in *6.4.3 Motion* or *6.4.1 Alarm*.
Current Lock (%): Displays the current percentage of the locked event recordings in the hard disk. If the amount of locked event recordings has reached the maximum lock percentage, the NVR will be unable to lock new event recordings.
Unlock All: Click this button to unlock the locked part of hard disk.
Delete All: Click this button to delete all the unlocked data in the hard disk. WARNING: This will effectively ERASE the hard disk's contents, except for the locked portion.
Format Disk: Click this button to format the whole HDD. WARNING: This will effectively ERASE the ENTIRE hard disk!!

6.4.3 RAID

The RAID function (Redundant Arrays of Independent Disks) can enable multiple hard disks to act as one, and the data will be spread out over the disks in one of several ways which are called “RAID levels”. The NVR only supports RAID 5, which can increase disk read and write speed, offer fault tolerance and provide efficient use of storage space.

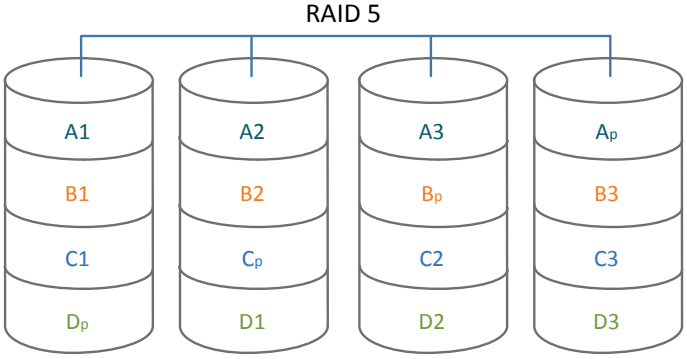
Note:
1. To establish a RAID 5 volume, a minimum of **three** HDDs are required.
2. It’s highly recommended to use enterprise level and anti-rotational vibration HDDs with the same Brand, Model and Capacity.
3. Hot swapping function is not supported. Removing the HDDs without powering off the NVR will reboot the NVR automatically.

Figure 6-36

RAID Type:

Off: No RAID.

RAID 5: It takes at least three HDDs to build up a RAID 5, and only one of the HDDs will be used for recovering data while the rest of the HDDs will be used for data storage purpose. Hence, the RAID 5 array will not be destroyed by a single drive failure because the system can recover the data on the remaining disks. However, if more than one disk fail, the data will be missed and cannot be recovered.



The total capacity of a RAID 5 array is the size of the smallest disk times (N-1) disks. For example, a RAID 5 volume with three 200 GB disks and one 100 GB disk will have a total capacity of 300 GB. {100 GB x (4-1) = 300 GB}.

RAID State: Shows the RAID and disk state. (No RAID, Broken, Degrade, Rebuilding, Normal, EzBackup, Unknown, or System Error, No RAID Now. If connecting to more than one disk, it will show Disk1, Disk2 …DiskX is ok.)

To enable the RAID 5 function, follow the steps below:

1. Select RAID 5, the following message appears. Click Yes to configure the RAID settings. And the NVR will automatically reboot.

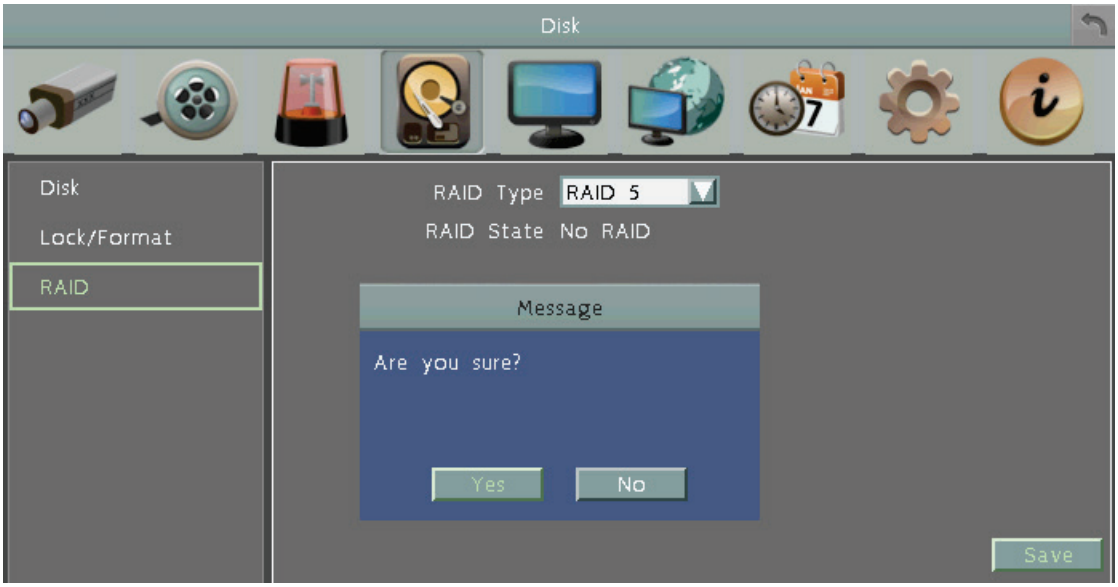


Figure 6-37

2. Enter the RAID menu again, the RAID 5 is enabled.

6.5 Display Setting

You can configure the settings for displaying the camera / NVR information on the live view image. You can also set up the sequencing order for the Main / Call monitor.

6.5.1 Monitor OSD

Figure 6-38

Title: Check the box to display camera titles.

Date/Time: Check the box to display current date/time.

Event Status: Check the box to display event status.

HDD Status: Check the box to display hard drive status.

Playback Date/Time: Check the box to display playback date/time (only for main monitor).

Playback Status: Check the box to display playback status (only for main monitor).

Text Insert: Check the box to display text inserted.

Screen Mode: Select the suitable screen mode. Selections are: 1920x1080; 1280x1024; 1024x768; 800x600. Please see to *2.3.4 Display Aspect Ratio* for more details.

6.5.2 M/T SEQ

You can configure up to 20 steps of the sequencing order for the Main monitor. The Sequence will repeat continuously from step 1 to step 20 until interrupted.

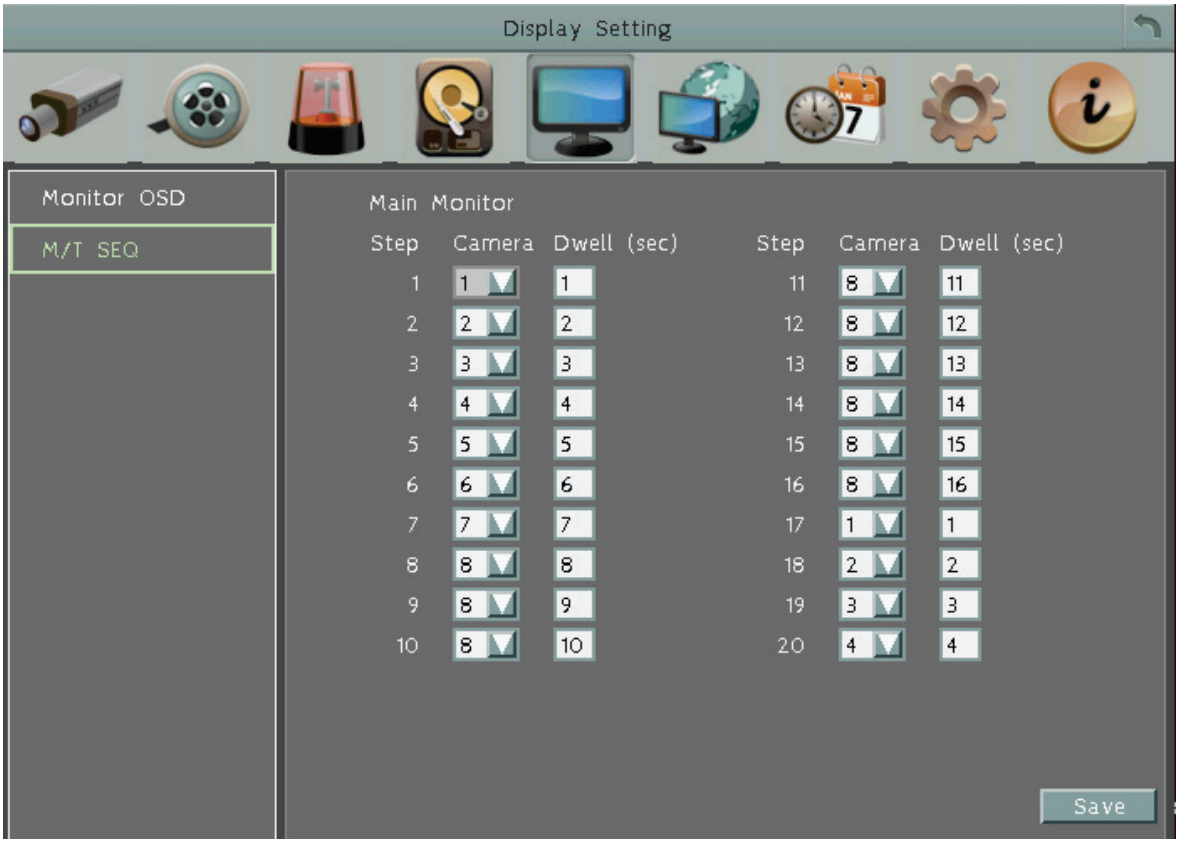

Display Setting
Monitor OSD
M/T SEQ
Main Monitor
Step Camera Dwell (sec) Step Camera Dwell (sec)
1 1 1 11 8 11
2 2 2 12 8 12
3 3 3 13 8 13
4 4 4 14 8 14
5 5 5 15 8 15
6 6 6 16 8 16
7 7 7 17 1 1
8 8 8 18 2 2
9 8 9 19 3 3
10 8 10 20 4 4
Save

Figure 6-39

Step: The sequencing order.

Camera: Select a camera for the specific step.

Dwell (sec): Sets up the dwell time between 0 and 60 seconds for each step.

6.6 Network

The NVR allows you to use a Web browser to remotely view and manage the system. You can also receive live video streaming from the NVR using your smartphone.

Note: Since every Network Configuration is different, please check with your Network Administrator or ISP to see if your NVR should use specific IP addresses and/or port numbers.

6.6.1 LAN & WAN

According to your network environment, select **Static IP, DHCP** or **PPPoE** to configure an IP address to the NVR.

Figure 6-40

Port Type: There are two port types. The LAN (POE) port is for connecting the Uplink port.

The WLAN (WAN) port is for connecting the NVR to the network. Please select WLAN (WAN) to further configure the **Network Type** of the NVR.

Network Type: Three options are selectable: **Static IP**, **DHCP** and **PPPoE**.

Static IP: User can set a fixed IP for network connection.

DHCP: DHCP server in LAN will automatically assign an IP configuration for the network connection.

PPPoE: For direct connection to the DSL only. Verify with your ISP if they use PPPoE.

IP address: Displays the NVR's current IP Address. A static IP address must be set manually. If DHCP is selected, this value will be assigned automatically.

Subnet Mask: Displays the subnet mask for your network so the NVR will be recognized within the network. If DHCP is selected, this value will be assigned automatically.

Gateway: Displays the gateway on your network for the NVR to use when communicating with any devices not on the local network. If DHCP is selected, this value will be assigned automatically.

DNS Server 1: Displays the primary DNS server for your network. If DHCP is selected and an internet connection is available, this value should be assigned automatically. This field must have a valid DNS address in order to use the DDNS feature (see *6.6.3 DDNS*).

DNS Server 2: This field shows the secondary DNS server for your network.

HTTP Port: Port number for HTTP/WEB communication.

Bandwidth Limit (Kbps): Specify, disabled / 128 K/ 256 K / 512 K / 768K / 1M / 3M bps. This is the maximum bandwidth that the NVR is allowed to use on the network. This is a useful function when connecting the NVR to busy or heavily loaded networks, or when accessing the NVR(s) over a WAN.

Connect: Click to test the network connection.

Additional information:

1. Set up the NVR Network Menu according to the instructions detailed in the Networking chapter of this NVR's manual.
    a. If using DHCP, all settings will be detected automatically. While DHCP is a useful tool for determining the network settings, if you set up your NVR in this manner its IP address may change at different times for different reasons, particularly after a power failure. If the IP address of the NVR changes, you may have difficulties accessing your NVR locally and/or remotely. It is strongly recommended that you assign a fixed (static) IP address to your NVR, and that in order to avoid address conflicts the IP address assigned be outside of the DHCP range of addresses your router issues to DHCP clients. Please do not set the DHCP address issued to the NVR by the router as its static IP address unless you take specific steps that program your router to prevent such address conflicts.
    b. If using a Fixed IP (recommended), you will need to input the information manually. In order for DDNS to work, you must enter valid data, compatible with your

network, for all four of the network setting fields: IP address, subnet mask, default gateway and the DNS Address (depending on your network hardware and IP configuration this may be the IP address of your router/gateway, or it may be the actual IP address of the local DNS server). The DNS server IP is required because your DNS server provides critical information necessary for the NVR to communicate with the DDNS server.

You can obtain the actual DNS IP from your Internet Service Provider (ISP); or, from a PC located on the same LAN as the NVR, go to http://www.dnsserverlist.org/ to obtain a list of the IP addresses of their recommendation of the best servers to use for your location.

2. If you are connecting through a router, make sure that you have 'opened up' all the required network ports in the port forwarding section of your router's setup options. That is, you have directed the router to send any incoming traffic using those IP ports to the LAN IP address of the NVR. Useful information about router port forwarding can be found at www.portforward.com . Different routers may use different terms for port forwarding function. For instance, D-Link calls it virtual server, Netopia calls it pinholes.

   The default port for the NVR is: 80

   Note: Port 80 is the default port used for Web browsing. Because of this, in order to prevent the average user from hosting a Web server, most ISPs BLOCK traffic using port 80 from reaching the average site. If you only plan to view your NVR on a LAN, you can use port 80, and don't have to concern yourself with DDNS or routers. However, if you desire **remote access** to your NVR, perhaps using DDNS (optional), you MUST select functional ports and set up the port forwarding in your router. Other ports, such as 8080 and 8000 are sometimes blocked by ISPs as well.

   What port(s) should be used? There are 65,535 valid IP ports to choose from. These are broken down into three groups:

   - Well Known Ports 0 thru 1023
   - Registered Ports 1024 thru 49151
   - Dynamic and/or Private Ports 49152 thru 65535

   So, rather than encounter a port conflict by choosing a port commonly used for another purpose (like port 25 for SMTP mail or port 448 for secure sockets), choose an 'unusual' port number. For example, add 50,000 to your house number: 50,123 is less likely to lead to a port conflict. For a list of the known and registered ports, see http://www.iana.org/assignments/port-numbers

6.6.2 Email

You can configure the Email settings for NVR to send Email alert when an event occurs.

Figure 6-41

SMTP Server: Assign the SMTP (e-mail) server's name. Note that for more reliable email service, use the server's IP address.

SMTP Port: Assign the port number used by the SMTP server.

Authentication: Check this box if the SMTP server requires authentication (user name / password).

SSL: Check the box if mail server needs communication to be encrypted by SSL.

User Name: Input the login user name if the SMTP server requires authentication.

Password: Input the password if the SMTP server requires authentication.

Confirm: Input the password again to confirm the password.

Sender Email: Input the e-mail address of the sender (the NVR). Sender's e-mail address has to match the user name and password above.

Receiver Email 1: Input the first e-mail address that event messages are sent to.

Receiver Email 2: Input the second e-mail address that event messages are sent to.

Receiver Email 3: Input the third e-mail address that event messages are sent to.

Email Subject: Input email subject.

6.6.3 DDNS

DDNS (Dynamic Domain Name System) is a service used to map a domain name to the dynamic IP address of a network device. You can set up the DDNS service for remote access to the NVR.

Figure 6-42

DDNS assigns a domain name (URL) to the NVR, so that the user does not need to go through the trouble of checking if the IP address assigned by DHCP Server has changed. Once the IP is changed, the NVR will automatically update the information to the DDNS to ensure it is always available for remote access.

Before enabling the following DDNS function, user should have applied for a host name from the DDS service provider's website. We support four DDNS server providers: **www.everfocusddns.com** and **www.dyndns.com.**

Note: We highly recommend that you use **xxxx.everfocusddns.com** for the simplicity of setting up your NVR.

6.6.3.1 EverFocus DDNS

Note that the **DNS Server 1** (*6.7.1 LAN*) should be set up correctly or the DDNS will not work.

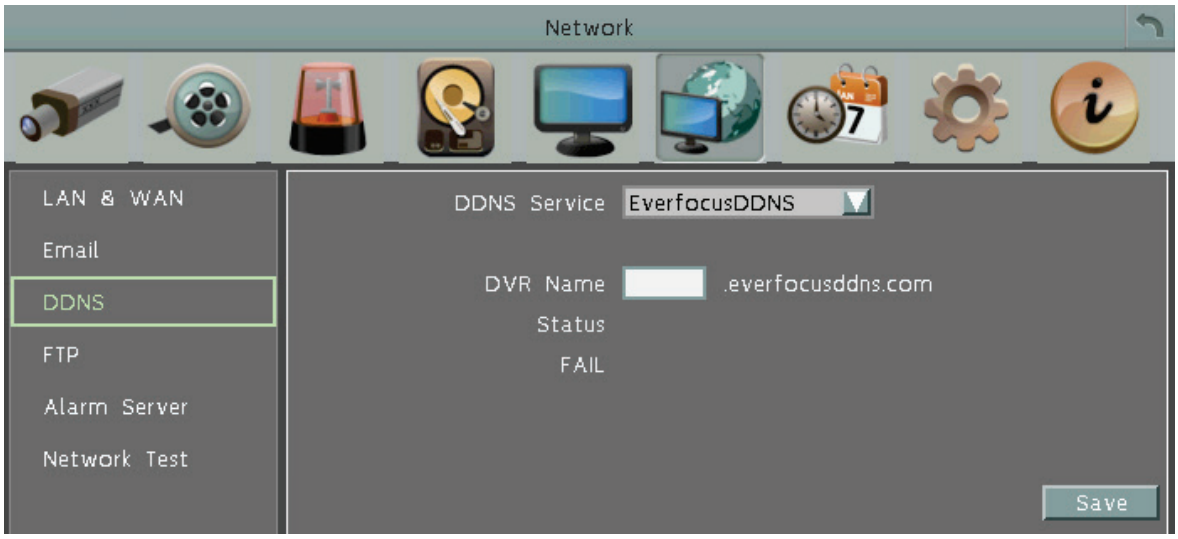


Figure 6-43

DDNS Service: Select **EverfocusDDNS** from the drop-down list.

DVR Name: Input the desired name for the DVR, and you can enter up to 32 letters. If the length of the name exceeds the text field size on the OSD, you can move your cursor onto the text field to display the entire name on the OSD.

Note that the name of the DVR cannot include a space, or a dot (period) or any special characters particularly ~ ! @ # $ % ^ & * ( ) + < > " ; : . ,

Note:

1. It is not necessary to append the HTTP port number to the DDNS name. The EverFocus DDNS server not only keeps track of your NVR's IP address, but also keeps track of the ports.
2. You can go to http://www.everfocusddns.com to check the DDNS name can be registered or not.

6.6.3.2 www.dyndns.org

Figure 6-44

DDNS Service: Select www.dyndns.org from the drop-down list.

Host name: Host name created through the dyndns account.

User name: User name of the dyndns account.

Password: Password of the dyndns account.

Confirm: Input the password again to confirm.

Setup Steps:

1. Apply for a host name from www.dyndns.org.
2. Make sure that the DNS Server 1 is set up correctly (see DNS Server 1 in *6.6.1 LAN & WAN*) or the DDNS will not work.
3. Select www.dyndns.org from the DDNS Service drop-down list.
4. Enter the host name in the Host Name field. Note that the name of the NVR cannot include a space, or a dot (period) or any special characters particularly ~ ! @ # $ % ^ & * ( ) + < > " ; : . , _
5. Enter the User Name / Password of the dyndns account.
6. The setting is complete. And you should now be able to remotely connect the NVR by typing the name you created into the address bar. Example: http://hostname.dyndns.com

Note: If you are connecting through a router, make sure that you have opened up all the required network ports in the “Port Forwarding” section of your router’s setup options. The default port of the NVR is 80. To set up Port Forwarding, please consult the manual of the router.

6.6.4 FTP

Set up the FTP server settings to enable the FTP function. The function is for users to upload the alarm / motion recordings or snapshots from sub stream to the FTP server. You can choose to upload either the recordings or snapshots, please see *6.3.1 Alarm* and *6.3.3 Motion.*

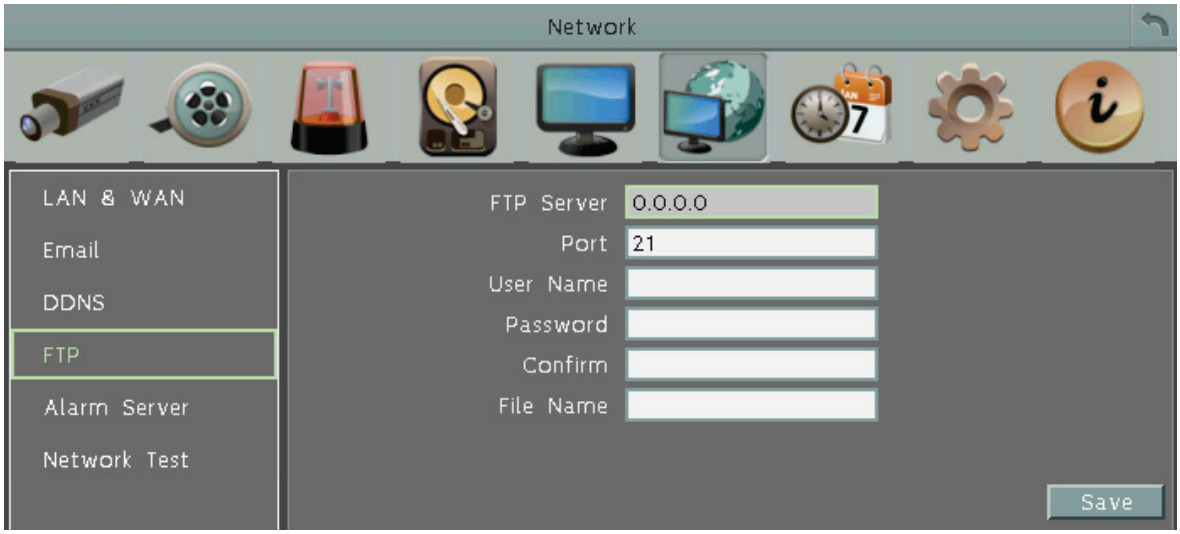


Figure 6-45

FTP Server: Enter the IP address or the host name of the FTP server.
Port: Enter the port number for the FTP server. Default is 21.
User Name: Set FTP User's name.
Password: Set FTP password.
Confirm: Input the FTP password again to confirm.
File Name: Enter the file name.

Note: If you want to upload recordings to the FTP, please go to the Remote / Mobile setting page to select H.264 codec.

6.6.5 Alarm Server

You can send out the alarm notifications to EverFocus's CMS software. Please also consult the CMS's user manual for network alarm settings.

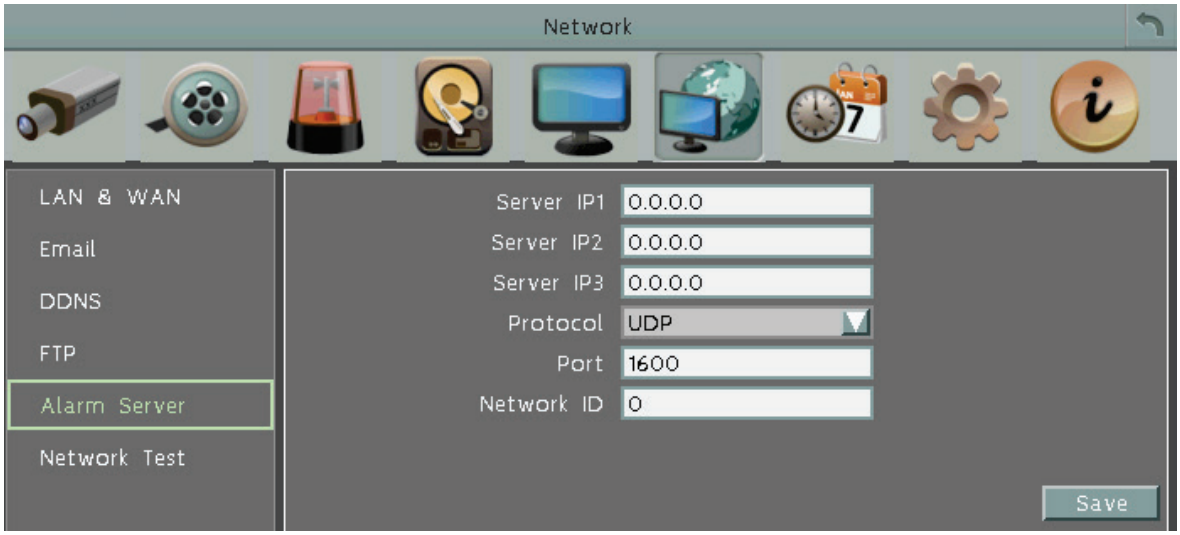


Figure 6-46

Server IP1~3: IP address of client PC. The network alarm can be transmitted to up to 3 addresses.

Protocol: Select the protocol type for alarm transmission. Note the protocol selected here should match the protocol set up for the CMS alarm server.

UDP: User Datagram Protocol.

TCP: Transmission Control Protocol.

Port: Select the transmission port for network alarm messages. The port setup here should match the port set up for the CMS alarm server.

Network ID: The network ID is an identifier for the alarm transmitter (NVR sending the alarm).

6.6.6 Network Test

The Ping utility is useful in diagnosing connectivity problems by obtaining responses from nodes progressively farther along the network. DNS functionality can also be confirmed by entering a valid DNS name instead of an IP address.

Figure 6-47

To verify basic network connectivity between the NVR and other LAN or WAN nodes, click the **Ping** button.

6.7 Schedule

You can set up the recording schedule with the desired time, event types or FPS.

6.7.1 Express Setup

You can set up a weekly recording schedule for the NVR to automatically record videos.

Figure 6-48

Weekend Start: Select a start date and time for the weekend.

Weekend End: Select an end date and time for the weekend.

Daytime Start: Select a weekday start time (Nighttime schedule ends when Daytime begins).

Daytime End: Select a weekday end time (Nighttime schedule ends when Daytime ends).

Record Type: Select a recording type for each time period.

Disable: No recording during the scheduled time period.

Normal+Event: Continuous and Event recordings.

Event Only: Event recordings only.

Action: Check the box to enable the Buzzer, Alarm Out, E-mail and Network actions selected in *6.4 Event* when an event occurs during the selected time period.

Note: For **Holiday** and **Others**, you can set up the recording schedule in *6.8.2 Holidays*.

6.7.2 Holidays

In addition to set up a weekly recording schedule, you can also set up a holiday recording schedule to automatically record videos on a specific day of the year.

Figure 6-49

Date Type: Select **Holiday** or **Others** if you have configured the settings in *6.8.1 Express Setup*. The Holiday and Others are two different groups designed for you to assign special days independently.

Recurrent Type: Select a date layout for the selected group above.

Disabled: Select to disable the Holiday / Others recording schedule.

One time: Select this option and then set up the specific date and year in the Details field. The NVR will start recording on this specific date.

Month/date: Select this option and then set up the specific date in the Details field. The NVR will start recording on this date yearly.

Month/Weekday: Select this option and then set up the specific date in the Details field. The NVR will start recording on this specific date.

Details: Click to specify the date for the selected group above.

Previous: Previous Page (30 Holidays Total)

Next: Next Page (30 Holidays Total)

6.7.3 Schedule

You can set up the camera recording mode by time of day on specific days of the week and/or holidays and other days. Please note that after the configuration, you have to check the **Schedule Record** box in the Record setting page to enable the schedule recording mode.

Figure 6-50

Camera (1~16): Select a camera number to change the schedule for the selected camera. Each camera can be controlled during a 24-hour time block for Holiday (Hol), Other (Oth), Sunday (Sun), Monday (Mon), Tuesday (Tue), Wednesday (Wed), Thursday (Thu), Friday (Fri), or Saturday (Sat).

Time (0~23): The numbers represent the 24 hours of a day.

Time Bar: The time bar uses three different colors to distinguish each recording mode.

Gray (No Record): No recording during this time block.

Pink (Event Only): Only events are recorded during this time block.

Blue-green (Normal+Event): (Default) Normal and event recording during this time block.

There are 48 blocks on the time bar, and each block represents half hour respectively. When moving the cursor onto the time bar, the exact time will appear at the right side of the time bar (shown as the above figure).

1. Select a camera first and double-click on desired start time block (no number on it) on a time bar. The selected time block will show a new sequence number on it and all the following blocks will turn to gray. This means the grey time blocks has been set to No Recording mode.
2. To change the time blocks to different record mode (which shows a different color), users need to double-click again on the block (with number on it) of any section. Every time the user clicks the first block of a section, the color switches from gray->pink ->blue-green.
3. Repeat the above steps to configure the record modes. You can configure up to six record modes on each time bar.

Click the "**Edit Timezone**" button to edit the recording parameters for a time zone.

Figure 6-51

Editing Timezone:

From: Displays time zone start time.

To: Displays time zone end time.

Record: Displays Record mode.

Resolution: Recording resolution is displayed.

Action: Check this box to enable notifications enabled elsewhere (Buzzer, Alarm out, E-mail, and Network Alarm) when an event occurs.

Apply to Days: This button can be used to copy schedules to other days. Select which days you wish to copy to. "Select All" selects all days, “Clear All” deselects all days. Click “OK” to copy the settings or "Cancel" to exit without copying.

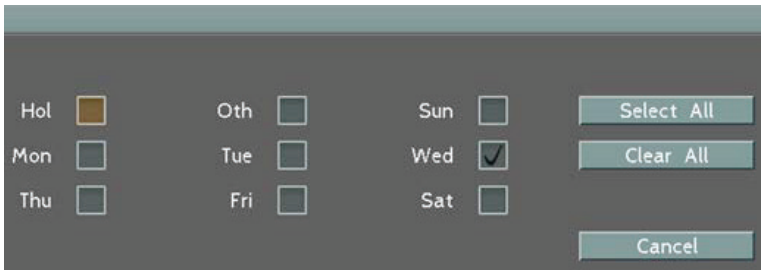


Figure 6-52

Apply to Cameras: This button can be used to copy schedules to other cameras. Select which cameras you wish to copy to. "Select All" selects all cameras, “Clear All” deselects all cameras. Click “OK” to copy the settings or "Cancel" to exit without copying.

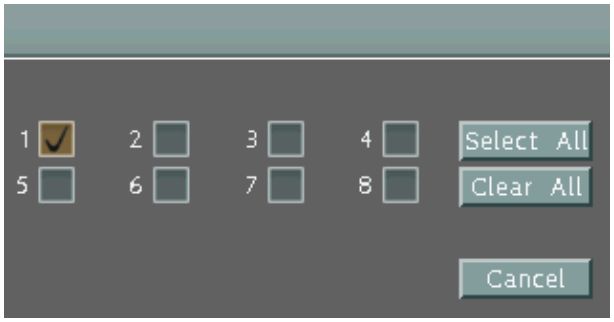


Figure 6-53

6.8 System Setting

You can configure the general settings for the NVR in this menu.

6.8.1 Date/Time

You can set up the date and time for the NVR.

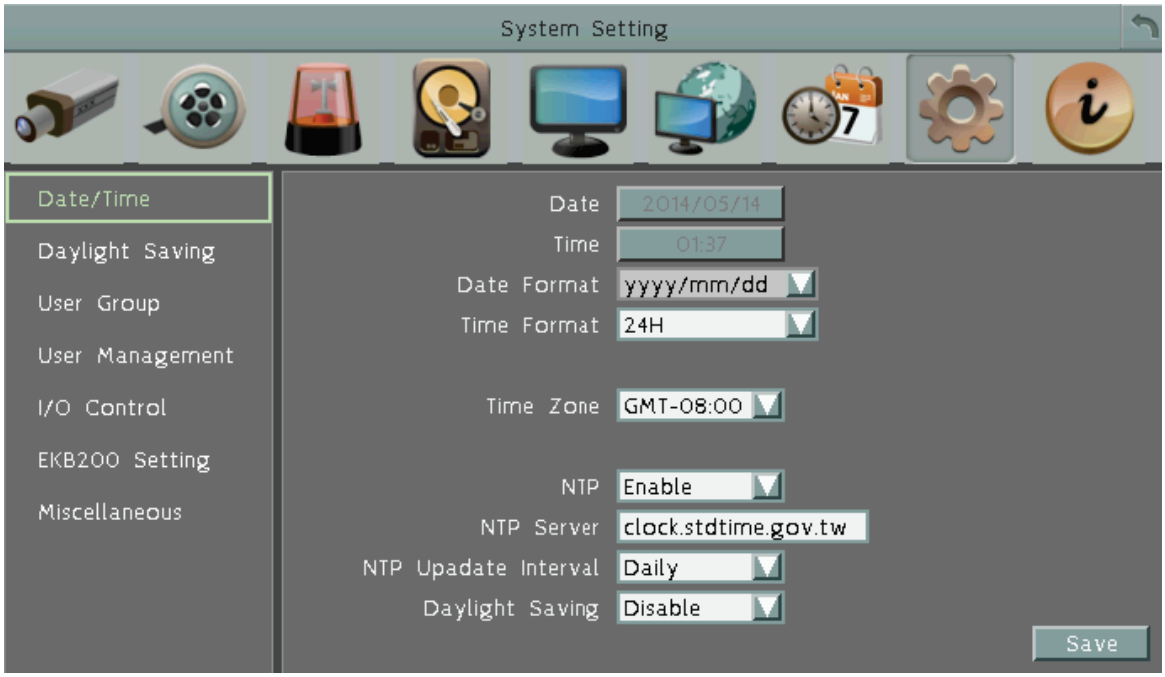


Figure 6-54

Date: Click to bring up the on-screen keyboard to set up the date.

Time: Click to bring up the on-screen clock to set up the time.

Date Format: Select a date format from the drop-down list.

Time Format: Select a time format from the drop-down list.

Time Zone: Select a time zone for the NVR to adjust to when updating from the time server.

NTP: Select Disable / Enable for NTP time synchronization.

NTP Server: Displays the time server address that the NVR uses for time synchronization. Requires operating network configuration and WAN or LAN access to a compatible NTP server. The default NTP address is the NTP server in Taiwan. To find a compatible NTP address of the NVR's physical location, follow the steps below:

a. Use a computer connected to the Network.
b. Click Start > Run > type "command" and then click OK.
c. In the DOS Prompt, type "ping pool.ntp.org" to find out the IP address of an NTP Server.

NTP Update Interval: The frequency that the system automatically updates the time via the NTP server. Select Daily, Weekly or Monthly.

Daylight Saving: This **Auto** daylight saving function is used for the system to automatically set up the daylight saving time but it is currently reserved for the users in the United States. So, if you want to set up the daylight saving time, please go to Daylight Saving setting page to manually set up the time (refer to *6.9.2 Daylight Saving*).

For the users in United States, if they want to use the **Auto** daylight saving functions, please follow the steps below:

1. Select a U.S Time zone (GMT -05:00 ~ GMT -08:00).
2. Enable the **NTP**.
3. Enter a NTP server IP address in United States.
4. Select **Auto** in the **Daylight Saving** drop-down list.
5. Click **Save** to save the settings.
6. The Daylight Saving setting page (refer to *6.9.2 Daylight Saving*) will be grayed out and automatically set to the correct daylight saving time.

6.8.2 Daylight Saving

You can configure the settings for NVR to automatically adjust to daylight saving time.

Note: If this page is grayed out, it means that you have enabled the **Auto** daylight saving function, please refer to *6.8.1 Date/Time*.

Figure 6-55

Daylight Saving: Check the box to enable automatic daylight saving time (DST).

Start Date: Set the start date for daylight saving time.

Start Time (hh:mm): Set the time when daylight saving time begins.

Set To (hh:mm): This is what the time will change to when daylight saving begins. For most regions, this will be one hour ahead of the “Start Time”.

End Date: Set the end date for daylight saving time.

End Time (hh:mm): Set the time when daylight saving time ends.

The time change difference on the End Date will be the same as the difference between the Start Time and End Time entered for the Start Date (typically 1 hour as in the example shown).

6.8.3 User Group

This setting page is used for configuring the privilege of the three access levels: Administrator, Manager and Operator. Check the boxes under an access level to enable the privileges of that access level. For example, if you check the **Clear Log** box under the Operator access level, only the Operator has the privilege to clear log.

Figure 6-56

Manage User at Own Level: Check this box for the user of an access level to be able to configure other users' settings of the same level at the User Management setting page (see *6.8.4 User Management*). For example, if this box under the Operator level has been checked, any user with the Operator privilege can go to the User Management setting page to set up the settings of other Operators.

User Management: Check this box under an access level to enable the users of that level to access the User Management and User Group setting page.

Previous: Click to return to the previous page.

Next: Click to enter the next page.

Note: Users with the Administrator account have full privileges, so the checkboxes under the Administrator access level will always be grayed out. The Administrator can grant privileges to both the Manager and Operator while the Manager can only give privileges to the Operator. The Operator has no right to configure this page.

6.8.4 User Management

You can create multiple user accounts (max: 20 user accounts) with different privileges. The NVR has default user accounts which you can choose to copy, edit, add or delete, and the default password is 11111111.

Figure 6-57

Copy: Click the button to copy the settings of an existing user account to a new user account.

Edit: Click the button to edit the settings of an existing user account.

Add: Click the button to add a new user.

Delete: Click the button to delete

Login: Check the box to enable the User Login function after logging out the NVR. For details on logging in the NVR, please refer to *3.1 Login*.

Auto User Log Off: Check the box to automatically logoff the NVR after 3 minutes of inactivity.

Previous: Click to return to the previous page.

Next: Click to enter the next page.

Apply: Click to apply all the settings.

You can further configure each user account and its settings individually, see the steps below:

1. Click on a user account (Figure 6-57).
2. Click the **Add**, **Copy** or **Edit** button, and the following page appears.

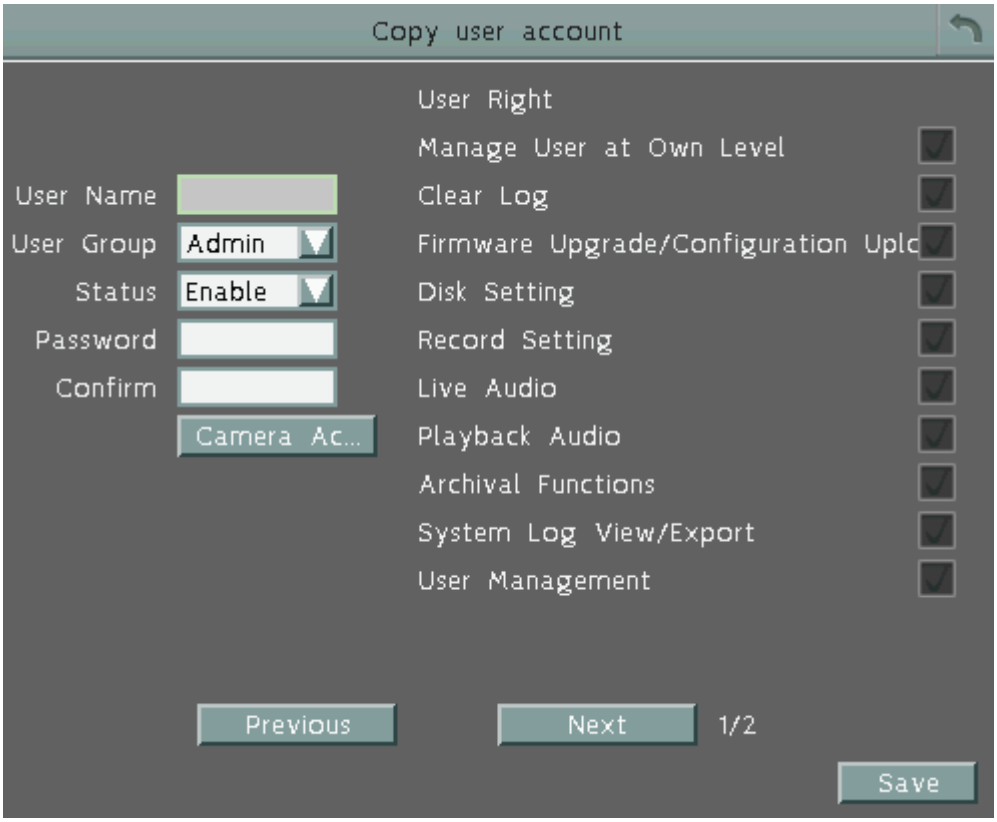


Figure 6-58

User Name: Click to bring up the keyboard and input the desired user name.

User Group: Select a user group (access level).

Status: Select to enable or disable the user account.

Password: Input the password.

Confirm: Enter the same password again to confirm.

Camera Access: Click to bring up a new setting page (figure 6-59), and check the boxes to enable the live, playback or PTZ functions of the cameras for local or remote access.

User Right: Check the boxes to enable the functions for the user account.

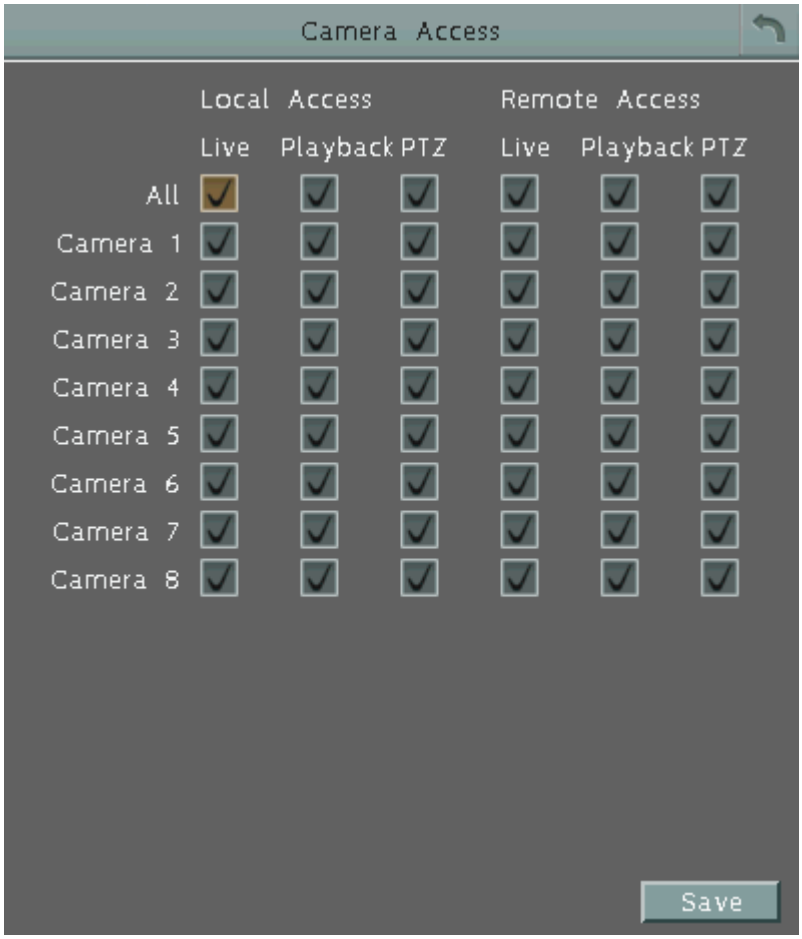

Camera Access
Local Access
Remote Access
Live
Playback
PTZ
Live
Playback
PTZ
All
Camera 1
Camera 2
Camera 3
Camera 4
Camera 5
Camera 6
Camera 7
Camera 8
Save

Figure 6-59

6.8.5 I/O Control

The I/O Control setup menu is used to define the settings for controlling the NVR through RS-485 / RS-232 communication protocol and for NVR to control the connected PTZ cameras. Please note that the RS-232 port on the NVR is currently reserved.

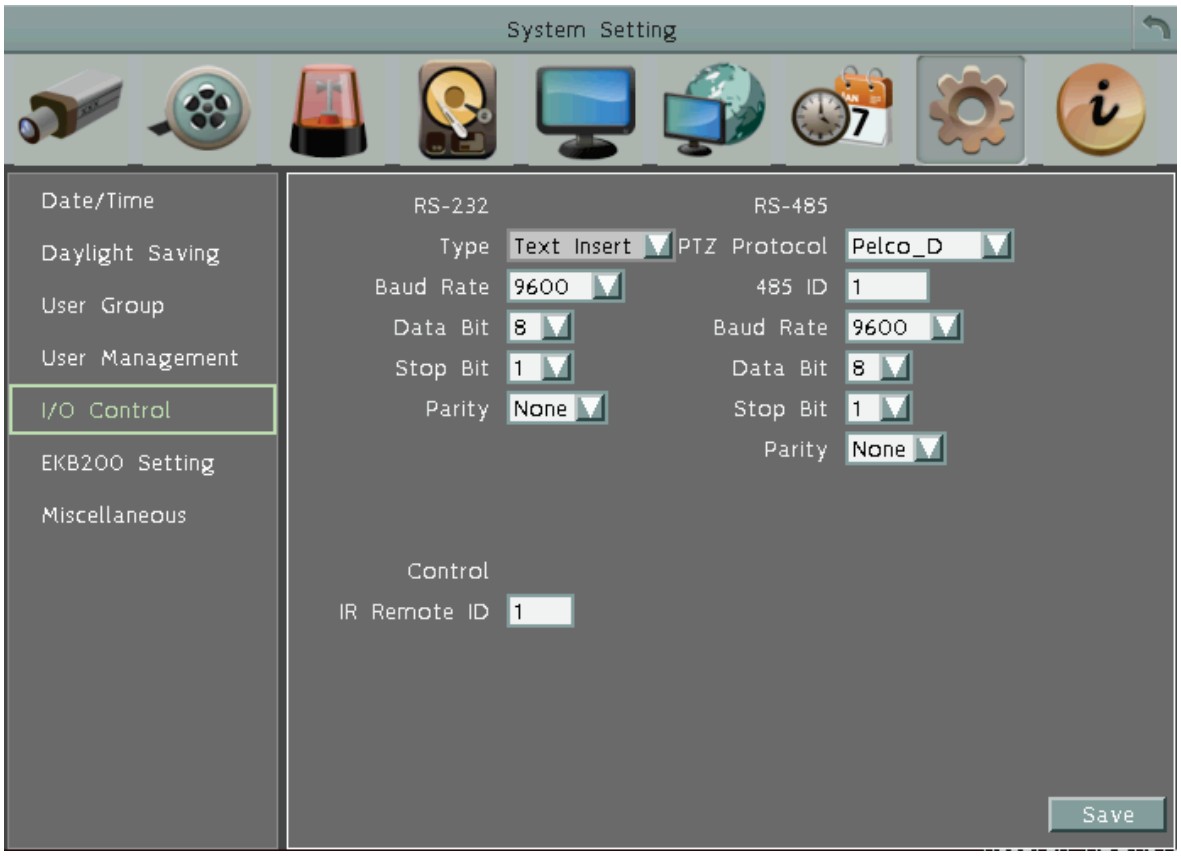


Figure 6-60

RS-232

Type: Select Control or Text Insert.

Baud Rate: This field is to set the speed at which is used to transmit instruction or information through the RS-232 port on the NVR. There are eight different speeds: 1200 BPS, 2400 BPS, 4800 BPS, 9600 BPS, 19200 BPS, 38400 BPS, 57600 BPS and 115200 BPS.

Data Bit: This field is the data bit at which you will be transferring. There are two settings for this option: 8 or 7.

Stop Bit: This field is to set the stop bit for the RS-232 connection. There are two different stop bits, 1 or 2.

Parity: This field is to select the parity level at which you will be connected. You can choose between None, Odd, or Even parity levels.

Note: For details on the RS-232 related settings, please consult the Technical Support Department of EverFocus.

RS-485

PTZ Protocol: Select PTZ protocol, choose from the following protocols: Transparent, Pelco_D, Pelco_P, Everfocus or Samsung. (Note: All cameras on the RS-485 bus must use the same protocol)

485 ID: This is the ID used by the EKB500 to send commands to the NVR. On an RS-485 connection, every device (PTZ, NVR and controller) must be assigned an unique ID number between 0 and 127.

Baud Rate: This field is to set the speed at which is used to transmit instruction or information through the RS-485 port on the NVR. There are eight different speeds: 1200 BPS, 2400 BPS, 4800 BPS, 9600 BPS, 19200 BPS, 38400 BPS, 57600 BPS and 115200 BPS.

Data Bit: This field is the data bit at which you will be transferring. There are two settings for this option: 8 or 7.

Stop Bit: This field is to set the stop bit for the RS232 connection. There are two different stop bits, 1 or 2.

Parity: This field is to select the parity level at which you will be connected. You can choose between None, Odd, or Even parity levels.

Control: One remote control can be used to operate four NVRs. The NVR to be addressed is selected by pressing the key corresponding to its ID number on the IR Remote control. Please refer to *Appendix C: IR Remote Control*.

IR Controller ID: Set up an ID for the NVR and allow the IR remote control to control this NVR.

6.8.6 EKB200 Setting

You can connect an EKB200, which is EverFocus' USB keyboard, to the USB port on the NVR to control the Iris, focus or the pre-configured PTZ control functions of the connected cameras. For details on how to configure the PTZ control functions, including Preset Position, Auto Pan, Tour and Pattern, please refer to *6.1 Camera*.

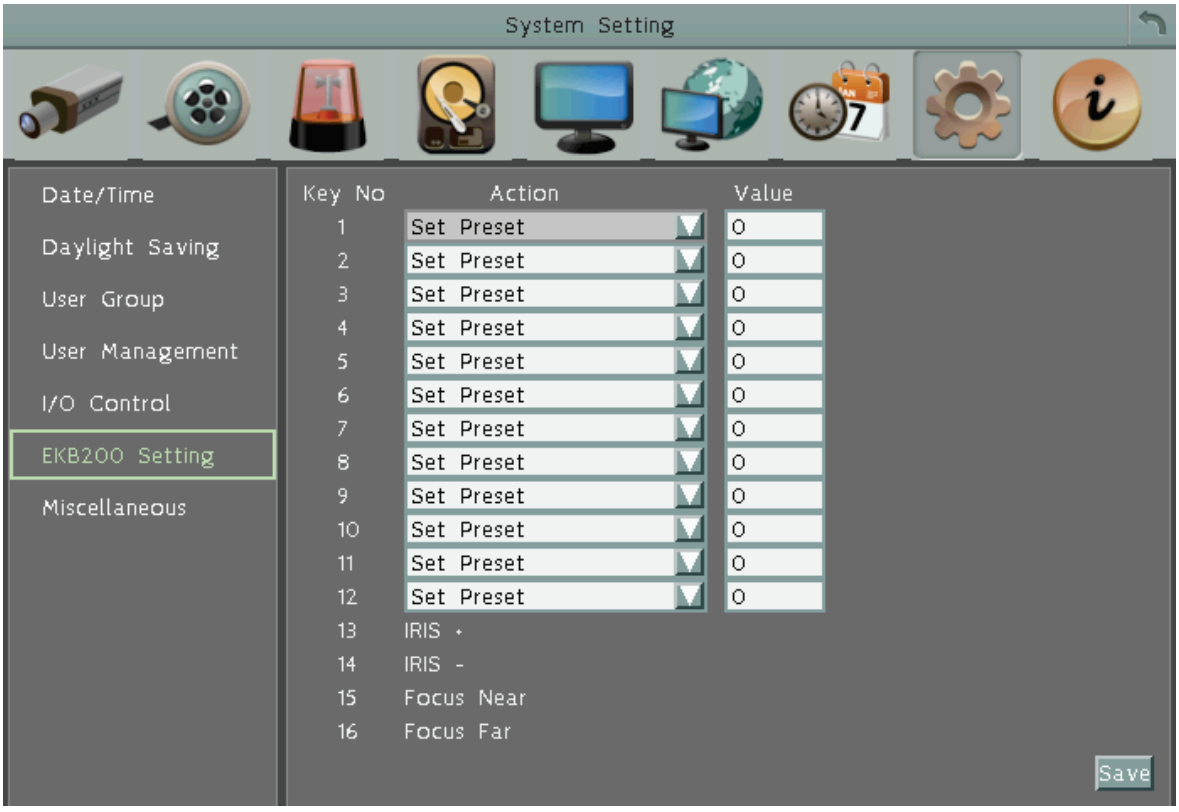


Figure 6-61

The control keys on the EKB200

Figure 6-62

After connecting the EKB200 keyboard to the NVR and configuring the PTZ control functions, you need to configure the above setup page to define the function for each control key on the keyboard. Click the **Save** button to save the settings. Once you press the control key on the keyboard, the camera will do the action which you've defined for the key.

【**Key No**】 The control key number on the keyboard.

【**Action**】 Select an item from the drop-down list to define the function for each key on the keyboard.

- **Set Preset:** You can use the joystick on the keyboard to select a position and then press this key to save the position as the Preset Position.
- **Go to Preset:** Press this key to let the camera go to the Preset Position number specified in the Value column.
- **Go to Home:** Press this key and the camera will go to the Preset Position 1.
- **Clear Preset:** Press this key to clear the Preset Position number specified in the Value column.
- **Run Auto Pan:** Press this key to start the AutoPan number specified in the Value column.
- **Stop Auto Pan:** Press this key to stop the AutoPan number specified in the Value column.
- **Tour Run:** Press this key to start running the Tour number specified in the Value column.
- **Tour Stop:** Press this key to stop running the Tour number specified in the Value column.
- **Pattern Run:** Press this key to start running the Pattern number specified in the Value column.
- **Pattern Stop:** Press this key to stop running the Pattern number specified in the Value column.
- **Set Auto Tracking:** Press this key to switch On / Off the Auto-Tracking function.
- **Select Tracking Object:** Press the key to display the tracking crosshairs on the screen. Use the joystick on the keyboard to select the desired tracking object and press this key again to save the selection.
- **Toggle Full Screen:** Press this key to toggle between the full screen and current screen.

【**Value**】 Type in the number for the selected Action item. For example, selecting **Go to Preset** from the Action drop-down list and typing in 2 in the Value column represents the Preset Position 2.

To activate the EKB200 keyboard on the PTZ Live View window, click the PTZ icon on the OSD Root Menu, and then you are able to control the PTZ camera over the EKB200 keyboard (please refer to *4.1 PTZ*).

6.8.7 Miscellaneous

You can upgrade the latest firmware, restore the factory default settings to the NVR, upload / save the NVR configuration settings from / to the USB or change the language in this setup menu.

Figure 6-63

Firmware

Current Firmware Version: Shows the current firmware version of the NVR.

Upgrade: Click to upgrade the latest firmware. Note you will need to restore the firmware file to the USB flash device and then connect the USB flash device to the NVR.

Configurations

Load Factory Default: Click to restore the NVR to factory default settings. The User Account, Network IP Settings, and Time settings will not be affected.

Load From USB: Click to upload the NVR configurations restored in the USB flash device.

Save To USB: Click to save the NVR configurations to the USB flash device.

Language: Choose which language the NVR uses.

Allowed Remote Reboot: Check the box to enable restarting the NVR via the Network.

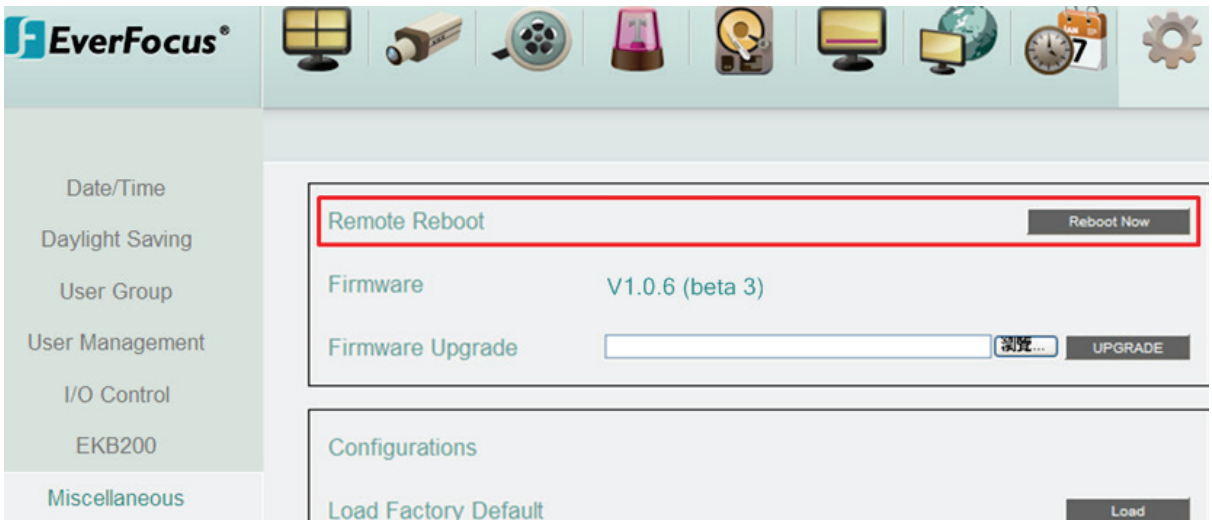


Figure 6-64

6.9 System Information

You can see the NVR information and Log data in this menu. Or export the log data to the USB storage device.

6.9.1 Configuration

In the System Menu, you can only see the information of the NVR, Network or HDD. No configuration can be done in this menu.

Figure 6-65

【System】

Version: Displays the firmware version.

Model: Displays the model name of the NVR.

NTSC / PAL: Displays the current video format automatically detected by the NVR.

S/N: Display the serial number of the NVR.

【Lan】

IP 1 / IP 2: Displays the IP address of LAN 1 / LAN 2 set up in the Network or Express menu.

MAC 1 / MAC 2: Displays the MAC address of LAN 1 / LAN2. This option cannot be changed.

NVR Name: Displays the DDNS name if configured.

Network ID: The ID number for EverFocus' CMS as set up in the Alarm Server menu.

【Status】

Disk (1~4): Displays the status of the internal hard disks. Normal hard disk operation is indicated by "OK".

Disk (5~8): Displays the status of the external eSATA storage device. Normal eSATA storage device operation is indicated by "OK"

Fans: Displays the status of the internal fan. Normal fan operation is indicated by "OK".

6.9.2 Log

You can choose, display or export log data using this menu.

Figure 6-66

Start Date / End Date: Click to bring up the on-screen keyboard to set up the start / end date.

Start Time / End Time: Click to bring up the on-screen clock to set up the start / end time.

Log Type: Select the desired log types.

View Log: Click to bring up the Log List shown as below.

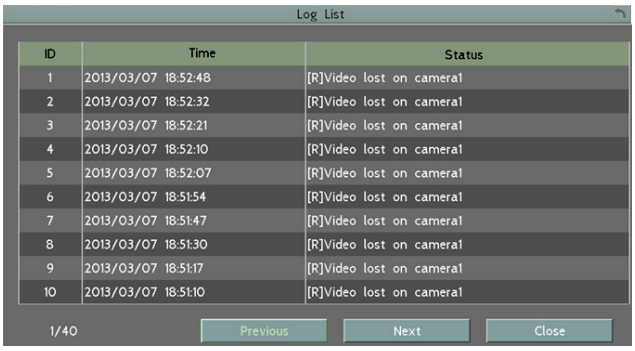

Log List
ID
Time
Status
1 2013/03/07 18:52:48 [R]Video lost on camera1
2 2013/03/07 18:52:32 [R]Video lost on camera1
3 2013/03/07 18:52:21 [R]Video lost on camera1
4 2013/03/07 18:52:10 [R]Video lost on camera1
5 2013/03/07 18:52:07 [R]Video lost on camera1
6 2013/03/07 18:51:54 [R]Video lost on camera1
7 2013/03/07 18:51:47 [R]Video lost on camera1
8 2013/03/07 18:51:30 [R]Video lost on camera1
9 2013/03/07 18:51:17 [R]Video lost on camera1
10 2013/03/07 18:51:10 [R]Video lost on camera1
1/40
Previous
Next
Close

Figure 6-67

Clear Log: Click to delete all the selected log data.

Export Log to USB: Click the Export button to export the log data to the USB storage device.

7. Remote Access to the NVR

You can access and control the NVR remotely by using the web browser.

7.1 Accessing the NVR

Follow the steps below to access the NVR from a computer.

1. Open an Internet Explorer window and in the address bar type the IP address.

   Local connection:

   http:// (IP address from the NVR's Network Menu): IP port used

   e.g. http://192.168.1.163:2468

   Internet connection:

   http:// (IP address given by your Internet Service Provider): IP port used

   e.g. http://57.182.67.204:2468

2. The Login window pops up. Type the User Name and Password. The default User Name is **admin**, while the password is **11111111**. Click **OK**.

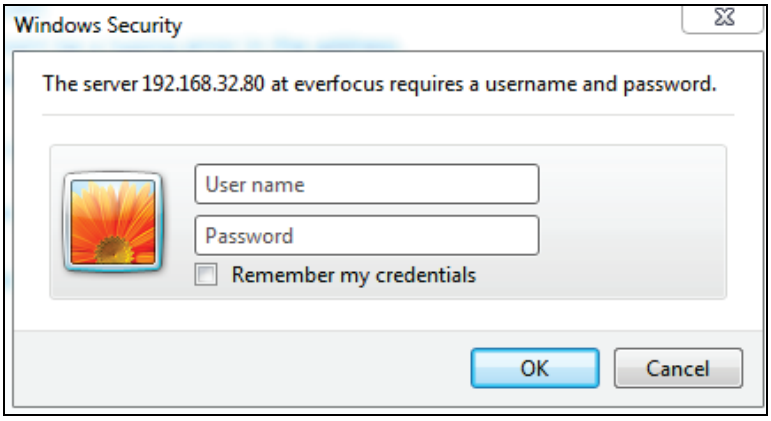


Figure 7-1

3. You might be required to download **ActiveX** and **JAVA software** for viewing the camera feed. If asked, click **Yes**. For more details, please refer to *7.2 Install JAVA Runtime* and *7.3 Browser Security Setting*.

4. When first connecting to the NVR's IP address, the following dialog may appear. Please check the "Always trust content from this publisher" box and click the **Run** button to run the EverFocus Viewer application.

Security Information
The application's digital signature has been verified.
Do you want to run the application?
Name: EverFocusViewer
Publisher: EverFocus Electronics Corp.
From: http://192.168.13.129
Always trust content from this publisher.
Run
Cancel
This application will run with unrestricted access which may put your personal information at risk. The publisher's identity has been verified. Run this application only if you trust the publisher.
More Information...

Figure 7-2

5. You may need to turn User Account Control off if you still can't see the Remote Live View. On the computer, click Start > Control Panel > System and Security > Action Center (click Change User Account Control Settings), the **User Account Control Settings** window appears. Adjust the slide bar to **Never Notify** and then click **OK**. Restart your computer if requested.

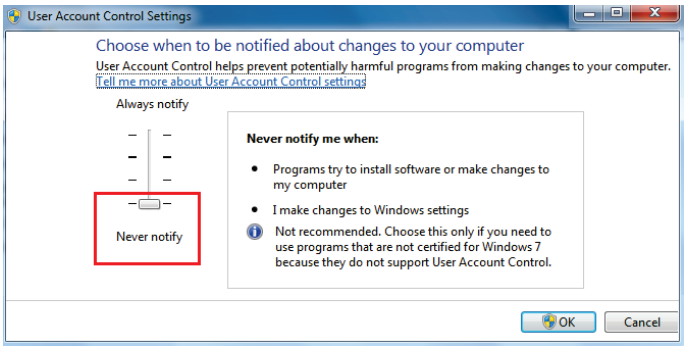

User Account Control Settings
Choose when to be notified about changes to your computer
User Account Control helps prevent potentially harmful programs from making changes to your computer.
Tell me more about User Account Control settings
Always notify
Never notify
Never notify me when:
Programs try to install software or make changes to my computer
I make changes to Windows settings
Not recommended. Choose this only if you need to use programs that are not certified for Windows 7 because they do not support User Account Control.
OK
Cancel

Figure 7-3

6. If your PC or laptop is running with Windows 8 or 8.1, it's required to run the browser as administrator when first entering the remote web page of the device. Go to **C:\Program Files (x86)\Internet Explorer**, right-click the browser and then click **Run as administrator**.

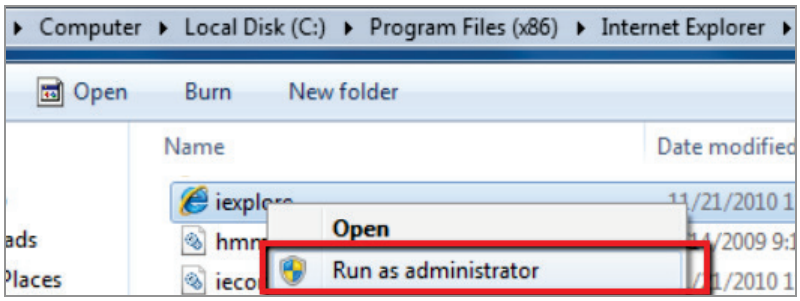


Figure 7-4

7.2 Install JAVA Runtime

You need to install the latest JAVA software for stable operation.

1. When first connecting to the NVR's IP address, the following dialog will show up if you didn't install the JAVA software or its latest version on your computer.

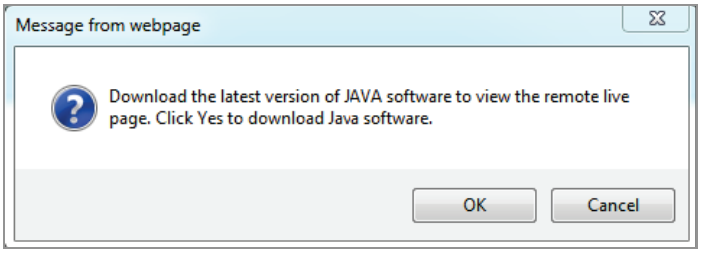

Message from webpage
Download the latest version of JAVA software to view the remote live page. Click Yes to download Java software.
OK
Cancel

Figure 7-5

2. Please click **Update** to go to the JAVA website http://www.java.com/en/, and download the latest version of the JAVA software.
3. Please go to the Control Panel > JAVA Control Panel to change settings.
4. If you can't find the JAVA in the Control Panel, please go to Program Files > Java > jre7 > bin and double-click the **javacpl** (JAVA Control Panel).
5. Click **Advanced** tap on the top of the window, and scroll to "Mixed code (sandboxed vs. trusted) security verification", and select the **Enable – hide warning and run with protections**.

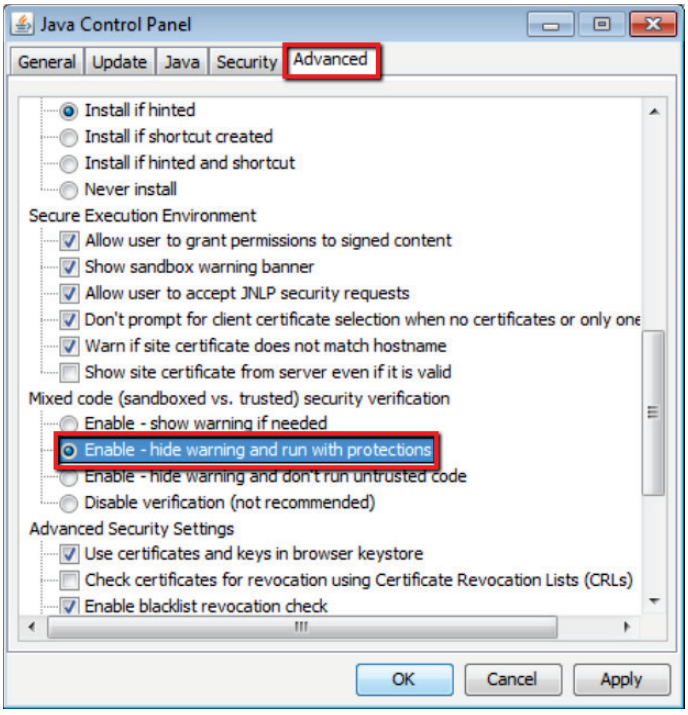

Java Control Panel
General
Update
Java
Security
Advanced
Install if hinted
Install if shortcut created
Install if hinted and shortcut
Never install
Secure Execution Environment
Allow user to grant permissions to signed content
Show sandbox warning banner
Allow user to accept JNLP security requests
Don't prompt for client certificate selection when no certificates or only one
Warn if site certificate does not match hostname
Show site certificate from server even if it is valid
Mixed code (sandboxed vs. trusted) security verification
Enable - show warning if needed
Enable - hide warning and run with protections
Enable - hide warning and don't run untrusted code
Disable verification (not recommended)
Advanced Security Settings
Use certificates and keys in browser keystore
Check certificates for revocation using Certificate Revocation Lists (CRLs)
Enable blacklist revocation check
OK
Cancel
Apply

Figure 7-6

6. Scroll to “Check for certificate revocation using”, and select the **Online Certificate Status Protocol (OCSP)**. Also, check **Place JAVA icon in system tray** in “Miscellaneous” option.

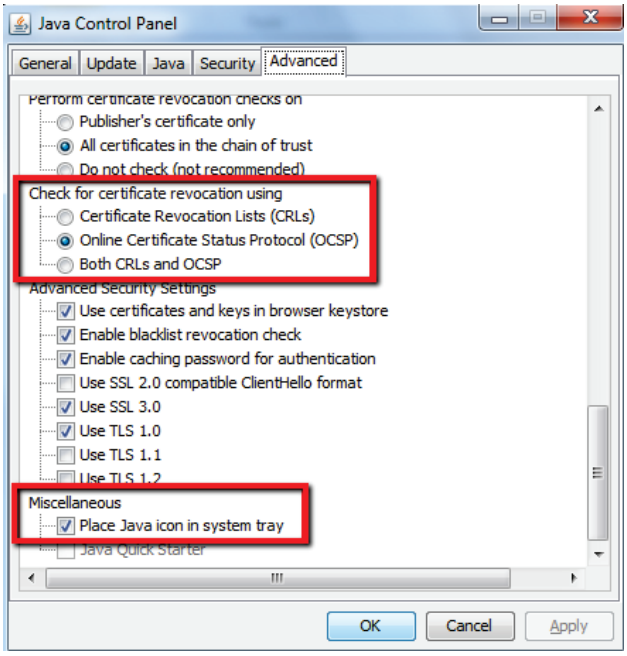


Figure 7-7

7. Scroll to “Default JAVA for Browser” and check **Mozilla family**.

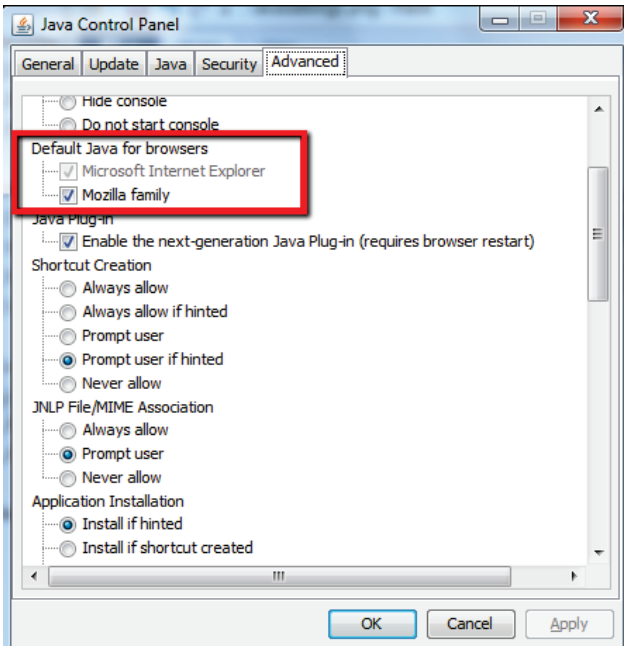


Figure 7-8

8. Connect the NVR’s IP address again and the yellow bar may pop up on the top of the window. Please click it to run the JAVA application.

7.3 Browser Security Setting

7.3.1 Installing ActiveX Controls

Follow the steps below to install the ActiveX Controls when you first connect to the NVR's IP address. If you do not see the images below, your security settings may be too high. If so, go to "Section *7.3.2 Enabling ActiveX Controls*."

1. You may also prompt to install the MSXML file. Please right-click the yellow bar and select "Run Add-on…"

Figure 7-9

2. Install the MSXML file when prompted to do so.

Do you want to run this ActiveX control?
Name: MSXML 5.0
Publisher: Microsoft Corporation (unverified publisher)
Run
Don't Run
This ActiveX control was previously added to your computer when you installed another program, or when Windows was installed. You should only run it if you trust the publisher and the website requesting it. What's the risk?

Figure 7-10

3. Now you will be able to see the remote live page.

Figure 7-11

4. Please refer to *2.6 Checking the Dynamic IP Address* to adjust the settings of the **User Account Control** if you still can't see the remote live view.

7.3.2 Enabling ActiveX Controls

Note this section is only necessary if you DO NOT see the image (Figure 7-9) popping up when you first connect to the NVR.

1. At the top of the Internet Explorer Window, click on **Tools** and then select **Internet Options**.

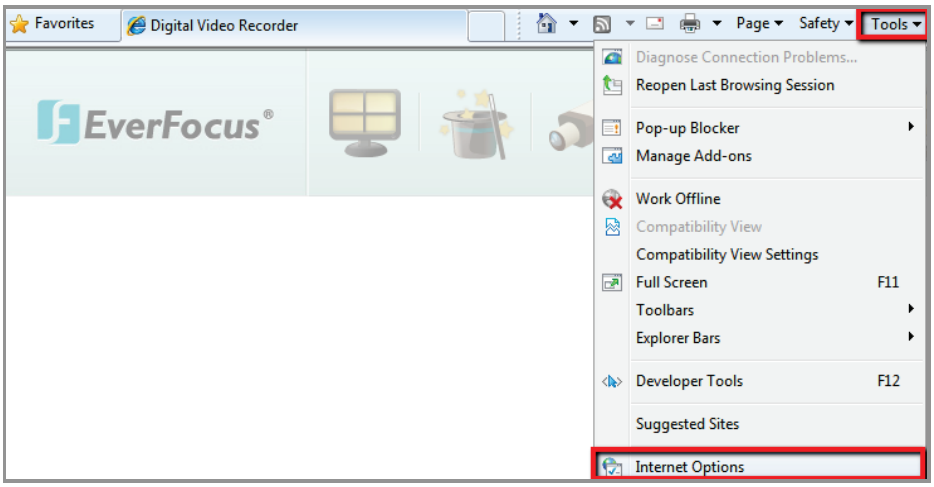


Figure 7-12

2. Click the **Security** tab at the top of the window and then click **Custom Level…**.

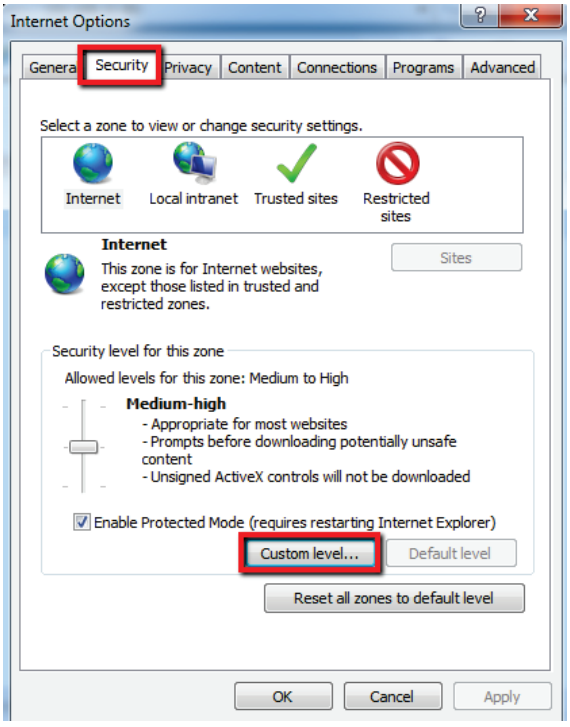


Figure 7-13

3. In the Security Settings window, scroll to “ActiveX controls and plug-ins”.

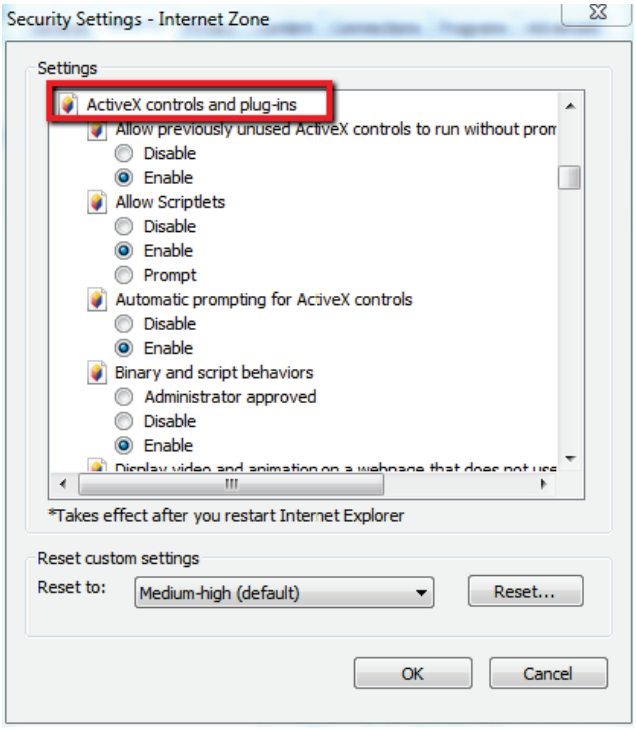


Figure 7-14

Set the controls as follows:

“**Enable**”:

- ✓ Allow previously unused ActiveX controls to run without prompt (*Internet Explorer 7 only*)
- ✓ Allow scriptlets (IE7 only)
- ✓ Automatic prompting for ActiveX controls
- ✓ Binary and script behaviors
- ✓ Display video and animation on a webpage that does not use external media player (*IE7 only*)
- ✓ Run ActiveX controls and plug-ins
- ✓ Script ActiveX controls marked safe for scripting

“**Prompt**”:

- ✓ Download signed ActiveX controls
- ✓ Download unsigned ActiveX controls

“**Disable**”:

Initialize and script ActiveX controls not marked as safe

4. Click **OK** and then choose **Yes** to change the security settings.
5. Close the window so you are back at the login screen.

6. Click the **Refresh** button to reload the page.

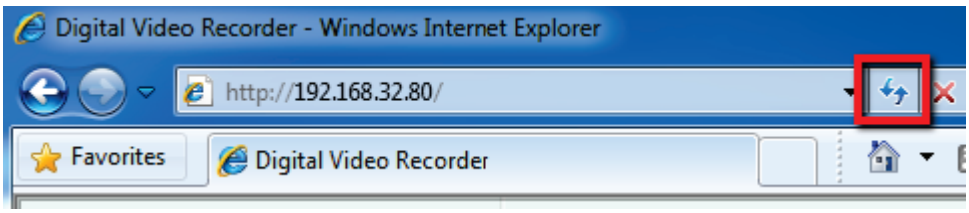


Figure 7-15

7. You may need to run the EverFocusViewer application when prompted to do so.

Security Information
The application's digital signature has been verified.
Do you want to run the application?
Name: EverFocusViewer
Publisher: EverFocus Electronics Corp.
From: http://192.168.13.129
Always trust content from this publisher.
Run
Cancel
This application will run with unrestricted access which may put your personal information at risk. The publisher's identity has been verified. Run this application only if you trust the publisher.
More Information...

Figure 7-16

8. The login page will show up. Type in the user name and password and click Login to view the cameras. The default User Name is **admin**, while the password is **11111111**.

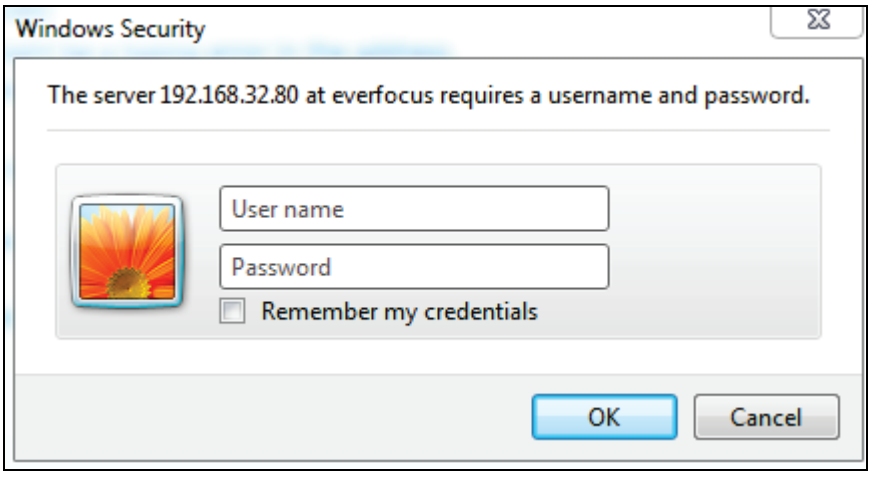


Figure 7-17

7.4 Remote Live View

When you access the NVR using web browser, the remote live view home page will display as below:

Live View:

Figure 7-18

No.	Name	Description
1	**Menu Bar**	For configuring the NVR.
2	**Layout**	Click a desired layout.
3	**Sub / Main**	Click to switch between the Main stream and Sub stream.
4	**Speaker / Microphone / Snapshot**	Click the **Speaker** button to transfer audio to the client side from NVR if there is a speaker on the PC and a microphone and preamp attached to the NVR, and audio recording is enabled on the NVR. Click the **Microphone** button to transfer audio to NVR from client side if there is a microphone attached to the PC and an amplifier and speaker attached to the NVR. Click the **Snapshot** button to save a snapshot of the video image
5	**Channel Buttons**	Click on the number to display the channel in full screen.
6	**Status Highlight**	Black Circle: Indicates the NVR is recording in sub-stream. Red Circle: Indicates the NVR is recording in main-stream. White: Indicates the live view is in a normal status. Orange: Indicates a motion is being detected. Blue: Indicates video loss. Red: Indicates an alarm / event is triggered. Grey: Indicates the live view is disabled.
7	**Live View Window**	Double-click on a camera image to enlarge the current display to full screen; double-click again to return to the normal view.

Menu Bar:

Figure 7-19

No.	Name	Description
1	**Live View**	Click to display the live view window.
2	**Camera**	Click to configure the camera settings. Please refer to *7.5 Camera.*
3	**Record & Playback**	Click to configure the record settings. Please refer to *6.2 Record & Playback.*
4	**Event**	Click to configure the alarm / event settings. Please refer to *6.3 Event*.
5	**Disk**	Click to display the HDD information. Please refer to *6.4 Disk.*
6	**Display**	Click to configure the display settings for displaying the camera information on the camera live view. Please refer to *6.5 Display Setting*.
7	**Network**	Click to configure the network settings. Please refer to *6.6 Network.*
8	**Schedule**	Click to configure the recording schedule. Please refer to *6.7 Schedule.*
9	**System Setting**	Click to configure the NVR time / user privilege / IO control / UI language or upgrading firmware and etc. Please refer to *6.8 System Setting.*
10	**System Information**	Displays the system information. Please refer to *6.9 System Information.*
11	**Copy**	Click to archive the recordings from the NVR to the client PC. Please refer to *4.7 Archiving the recordings or Log Data to the USB.*
12	**Search**	Search the recordings for remote playback. Please refer to *5. Search and Playback.*
13	**PTZ**	Click to control the connected PTZ cameras. Please refer to *7.6 PTZ*.

7.5 Camera

7.5.1 Camera Status

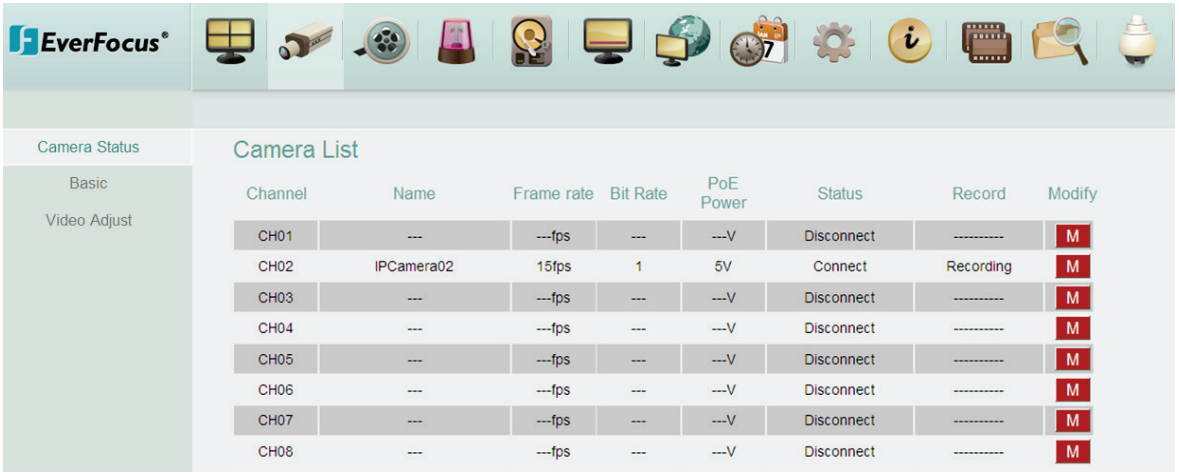

Camera Status
Basic
Video Adjust
Camera List
Channel
Name
Frame rate
Bit Rate
PoE Power
Status
Record
Modify
CH01 --- ---fps --- ---V Disconnect ---------- M
CH02 IPCamera02 15fps 1 5V Connect Recording M
CH03 --- ---fps --- ---V Disconnect ---------- M
CH04 --- ---fps --- ---V Disconnect ---------- M
CH05 --- ---fps --- ---V Disconnect ---------- M
CH06 --- ---fps --- ---V Disconnect ---------- M
CH07 --- ---fps --- ---V Disconnect ---------- M
CH08 --- ---fps --- ---V Disconnect ---------- M

Figure 7-20

【Camera List】

Channel: Displays the channel number.

Name: Shows the name of the connected IP camera.

Frame Rate: Shows the current frame rate of the connected IP camera.

Bit Rate: Shows the current Bit Rate of the connected IP camera.

PoE Power: Shows the current Bit Rate of the connected IP camera.

Status: Shows the connection status.

Record: Shows the recording status.

Modify: Click to bring up the following window and you can modify the ID and Password of the connected IP camera.

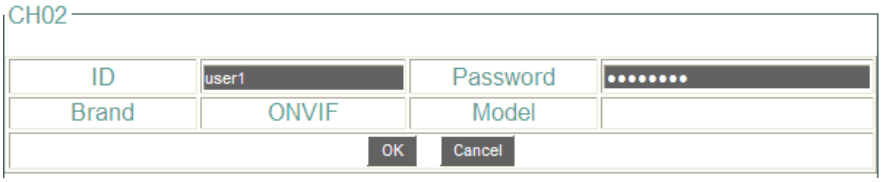


Figure 7-21

7.5.2 Basic

User can configure the detailed camera settings, PTZ and tracking functions in this setting page.

7.5.2.1 Camera

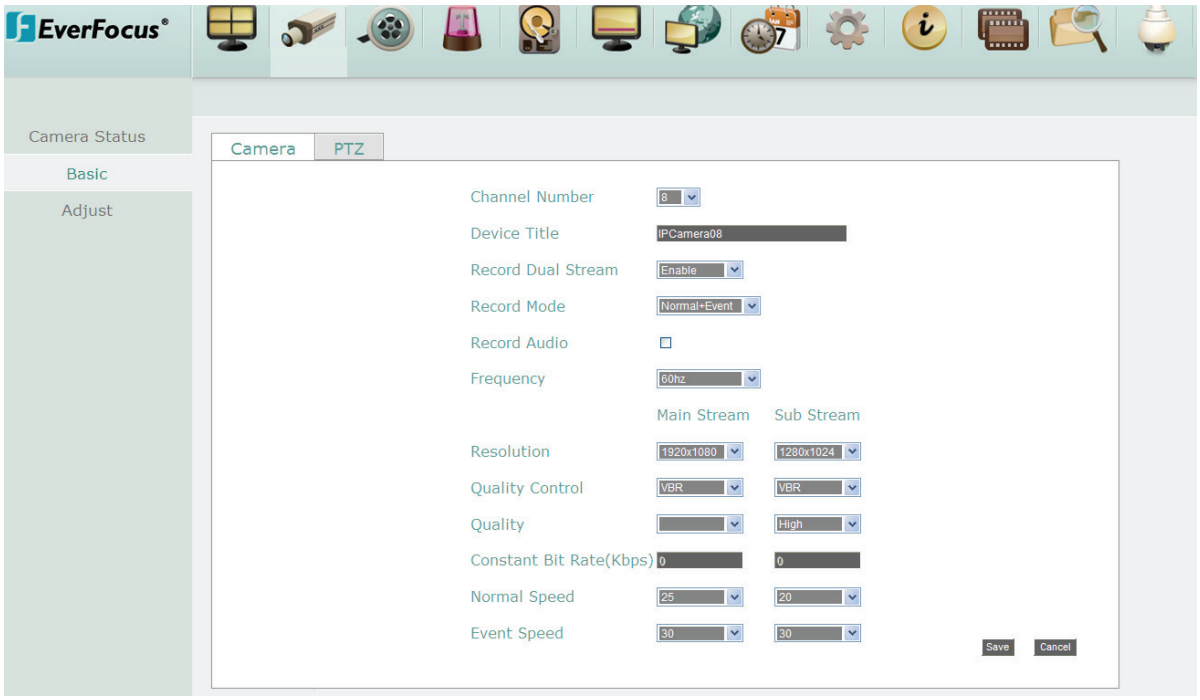


Figure 7-22

Channel Number: Select a desired channel for configuration.

Device Title: Enter a camera title.

Record Dual Stream: Select to enable or disable the dual streams recording function.

Record Mode: Select a recording mode from the drop-down list.

Normal+Event: Set all cameras to the Continuous and Event recording mode.

Event Only: Set all cameras to the Event only recording mode.

Record Audio: Check the box to enable audio recording on the NVR. Note that the Audio function is unavailable for Germany.

Frequency: Select **50hz** if you camera is using the PAL scanning system or **60hz** for the NTSC scanning system.

【Main / Sub Stream】 You can separately configure the settings for the Main and Sub Streams.

Resolution: Select a desired recording resolution.

Bit Rate Control: Select whether you want the stream to stream a **VBR (Variable Bit Rate)** or a **CBR (Constant Bit Rate)**.

Quality: If you use VBR, you can select an image quality of the camera.

Constant Bit Rate: If you use CBR, you can enter a desired bit rate (256~12,000 kbit) for each camera.

Normal Speed: Select a frame rate per second (FPS) for continuous recording. The frame rate is limited by the maximum total recording capacity of the NVR as allocated across all the installed cameras.

Event Speed: Select a frame rate per second (FPS) for continuous recording. The frame rate is limited by the maximum total recording capacity of the NVR as allocated across all the installed cameras.

Save: Click to add the camera and save the current settings.

7.5.2.2 PTZ

You can set up the Preset, Auto Pan, Tracking, Pattern and Tour settings in this page.

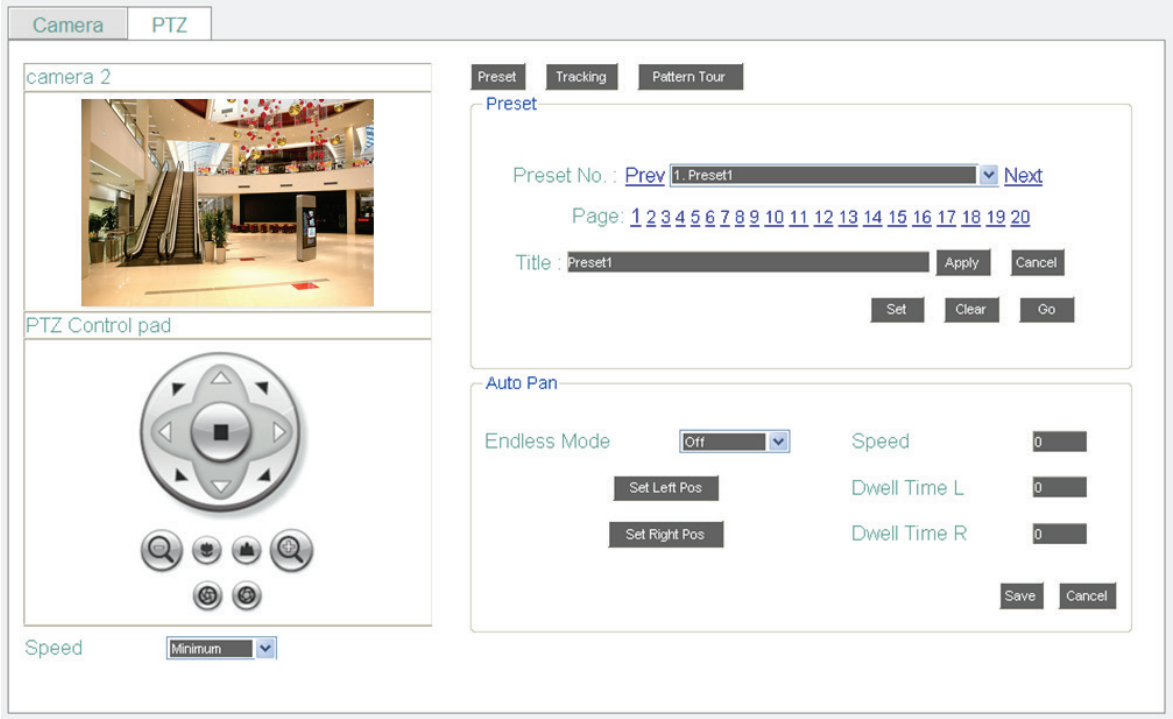


Figure 7-23

【Camera (1~16)】: Shows the PTZ camera live view. You need to select the PTZ camera from the **Channel Number** drop-down list in the **Camera** setting page (see *7.5.2.1 Camera*) before configuring the PTZ settings.

【PTZ Control Pad】:

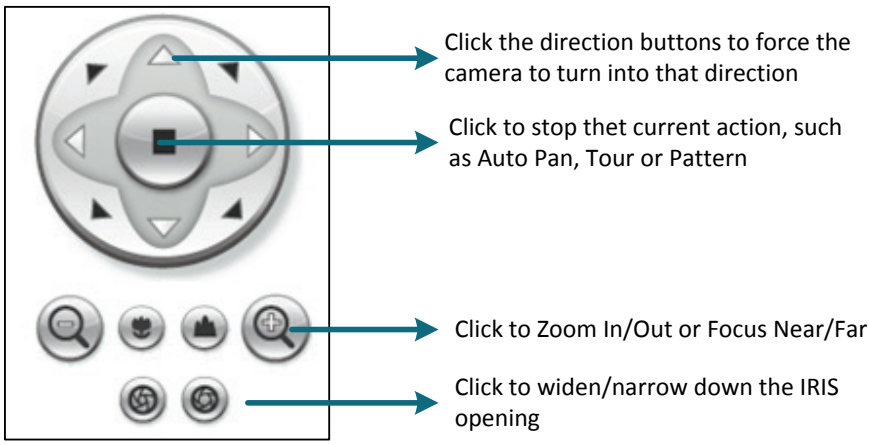

Click the direction buttons to force the camera to turn into that direction
Click to stop thet current action, such as Auto Pan, Tour or Pattern
Click to Zoom In/Out or Focus Near/Far
Click to widen/narrow down the IRIS opening

Figure 7-24

【Speed】: Select a pan and tilt speed from the Speed drop-down list for the camera to move to the directions when you use the direction buttons during the configuration period

Preset: Click the **Preset** button to set up the Preset Position or the Auto Pan function.

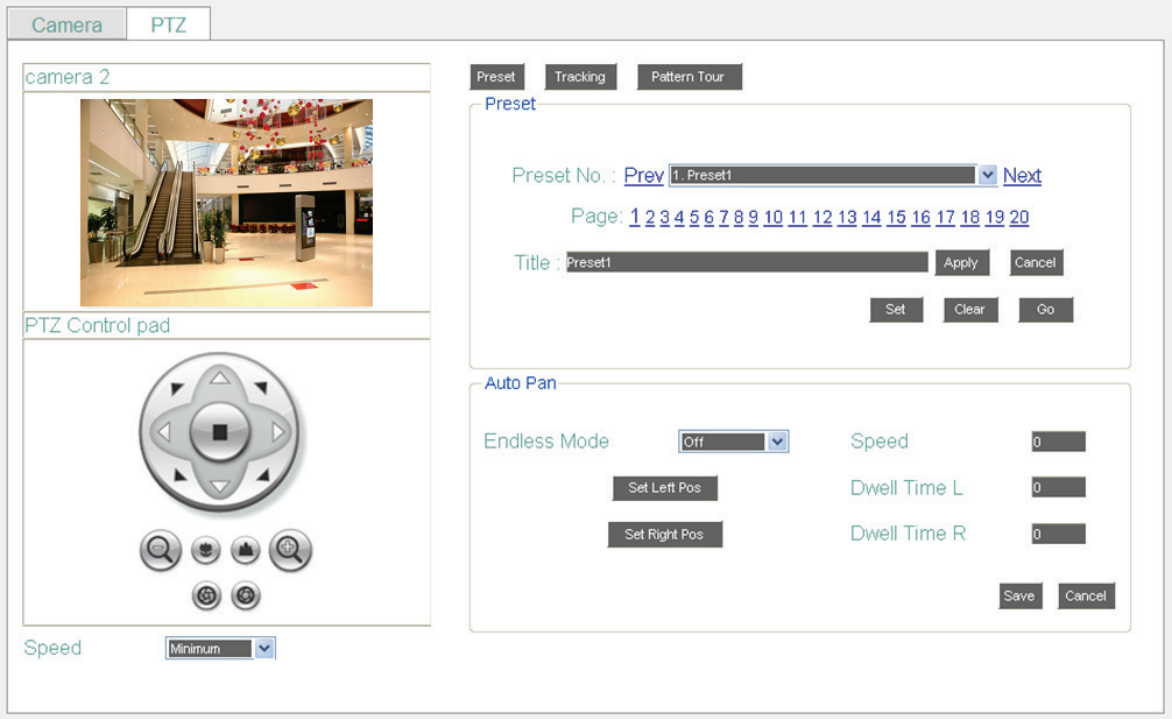


Figure 7-25

Preset: You can configure up to 192 preset positions in this field.

To set up a Preset Positions:

1. Adjust the camera view to a desired position using the direction button. You can select the pan / tilt speed from the **Speed** drop-down list for controlling the direction buttons. Adjust zoom, focus and Iris if necessary.
2. To set up the current camera view as a preset position, select a preset number from the **Preset No** drop-down list for the current camera view.
3. Optionally set up a title for this preset position in the **Title** field .Click **Apply** to save the title name or click **Cancel** to cancel the current changes.
4. Click **Set** to save the current position as the Preset Number you have selected.
5. Follow Step 1 to 4 to set up another preset position. You can click the **Next** button to go to the next page and then click the Preset No drop-down list to select a number. Or click on the number in the Page field to select a preset number.

To activate the Preset function on the PTZ Live View window, click the PTZ icon on the Menu Bar. Click the **Preset** button, click on the numeric buttons to select a Preset number and then click the **Go** button. The selected Preset position should be displayed on the camera view. Please refer to *7.6 PTZ* for detailed instructions.

Auto Pan: You can only configure one Auto Pan sequence. The configured Auto Pan (A to B Pan) sequence will always be numbered as "1". The number "2" will always be an endless pan around the given (not preconfigured) X/Y tilt axis.

Figure 7-26

Endless Mode: The Endless Mode is always numbered as "99" in the PRESET function. If you select **On**, the Preset number "99" will be the 360° endless pan function; if you select **Off,** the Preset number "99" will be the preconfigured A to B Pan function. To use the function, go to PTZ live view page first. Click the **Preset** button and click the Preset number "99". Finally, click **Go** to activate the Endless Mode.

To set up an Auto Pan Sequence:

1. Using the direction buttons to adjust the camera view to a desired position where you want to set up the position as the Left Position. You can select the pan / tilt speed from the **Speed** drop-down list for controlling the direction buttons. Adjust zoom, focus and Iris if necessary.
2. Click the **Set Left Position** button to save the current position as the Left Position.
3. Follow Step 1 to set up the Right Position and then click the **Set Right Position** to save the current position as the Right Position.
4. Enter a dwell time (1~99 seconds) for the Left and Right positions (the time that the camera will pause at each position).
5. Enter a speed (1~255) at which the camera will move during the Auto Pan sequence.
6. Click **Save** to save the settings.

To activate the configured Auto Pan on the PTZ Live View window, click the PTZ icon on the Menu Bar. Click the **Auto Pan** button, click "1" on the numeric buttons and then click the **Go** button. The camera will continuously move to the left and right positions which you have configured. Click "2" on the numeric buttons and then click the **Go** button will force the camera to pan 360° endlessly. To stop the Auto Pan function, click the **Stop** button on the PTZ Control panel.

Tracking: Click the **Tracking** button to set up the tracking function which is functional only when the selected PTZ camera is equipped with the tracking function.

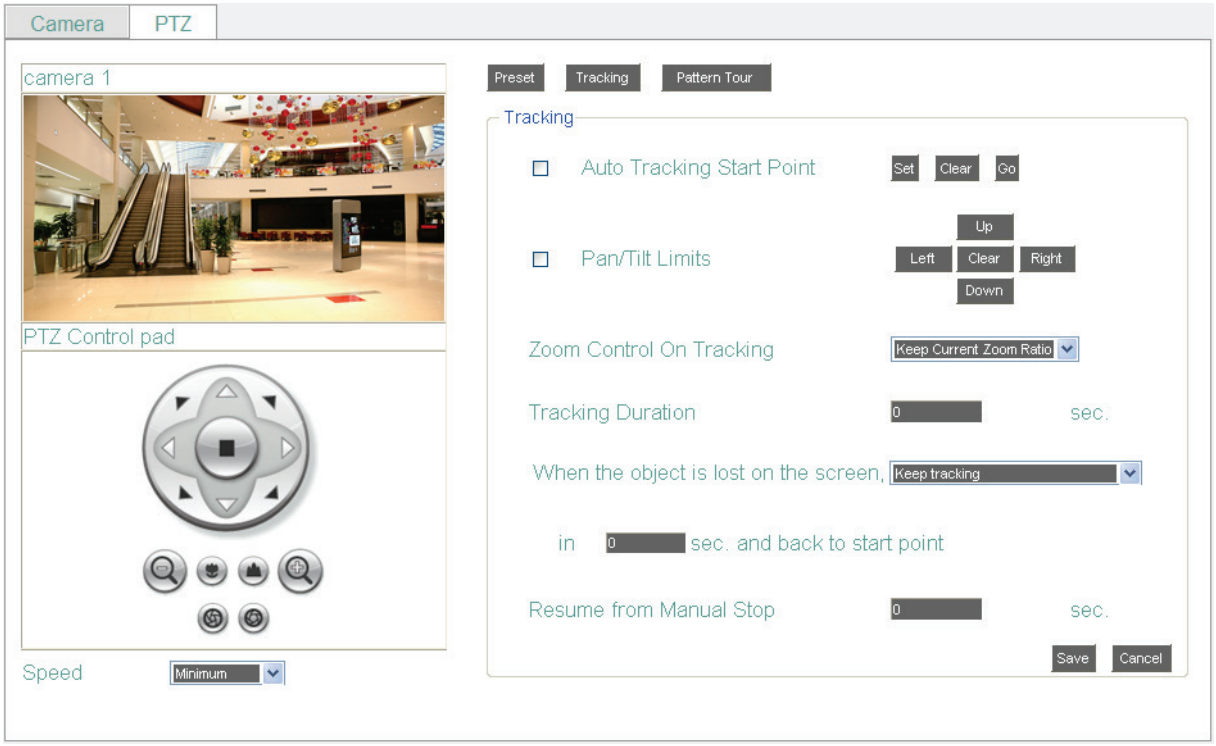


Figure 7-27

To set up the Auto Tracking function:

3. **Auto Tracking Start Point:** Check the box to enable a camera position to which the camera will return to after a tracking operation. Use the direction buttons to adjust the camera view to a desired position where you want to set up the position as the Auto Tracking Start Point. You can select the pan / tilt speed from the **Speed** drop-down list for controlling the direction buttons. Adjust zoom, focus and Iris if necessary. Click **Set** to set the position as the Auto Tracking Start Point.

   Note: If the user did not set up a start point or the start point is disabled, the camera will go back to track/monitor the initial point instead of the Auto Tracking Start Point, once the tracked object exits in the camera's field of view.

4. **Pan/Tilt Limit:** Check the box if you want to create a zone where the camera will track the movement inside the zone only. Before clicking the Upper/Lower/Right/Left buttons, use the direction buttons to adjust the camera view to a desired position where you want the camera to track the movement in that zone. You can select the pan / tilt speed from the **Speed** drop-down list for controlling the direction buttons. Adjust zoom, focus and Iris if necessary. Click the Upper/Lower/Right/Left buttons to set up the Pan/Tilt limits (Left and Right for the Pan limit; Upper and Lower for the Tilt limit).

Note: Please note that if enabling the **Pan/Tilt Limits** function, the position of the Start Point should be within the range of the **Pan/Tilt Limits**, or there will be a pop-up message showing "Setting error: Start Point is not inside Pan/Tilt Limits".

- **Zoom control on tracking:**
  Keep current zoom ratio: the current zoom ratio will stay fixed during the tracking process.
  Multi-step zoom function: the zoom ratio will change according to the distance of the object against the camera. When the object is moving further away, the camera will keep zooming in to track; on the other hand, when moving closer, the camera will zoom out to check whether it should track the object or not.
- **Tracking Duration:** User can set the tracking time duration of the camera (0~600 seconds). When the Tracking Duration is up, the camera will return to the Start Point. The function is used to prevent the camera from tracking an object which is intentionally set to lure the camera away.
- **When the object is lost on the screen:** User can select a tracking mode when the object is lost on the screen. The options are:
  Keep tracking: The camera will stop at the current position and wait for another moving object in the camera's field of view. Then, the camera will track the new object without changing zoom ratio.
  Zoom out and look for a new object: The camera will zoom out at the current position immediately for expanded the field of view and restart tracking a new moving object appearing in the camera's field of view.
  Stop tracking and zoom out: The camera will stop auto tracking and stay at the current position. Then, the camera will zoom out for expanded the field of view.
- **In sec and Back to Start Point:** Set up a period of time for the camera to stay at the current position before returning to the Start Point (0 is returning to Start Point without any waiting).
- **Resume from manual stop:** The function is used to set up the Auto Tracking restart time (0~600 seconds). If user manually operates the PTZ function during auto tracking process, the auto tracking function will stop. When the manual operation ceases, the camera will resume to "Auto Tracking Start Point" after a given period of time. Setting of value 0 indicates do not restart.

Note: In the on-going auto tracking process after object is identified, the PTZ function keeps the moving object in the center of the screen. But the PTZ function may stop if the object moves too slow and stays in center of the screen too long. In case like this the auto tracking may incorrectly assume the object is lost and ends the tracking process.

Pattern Tour:

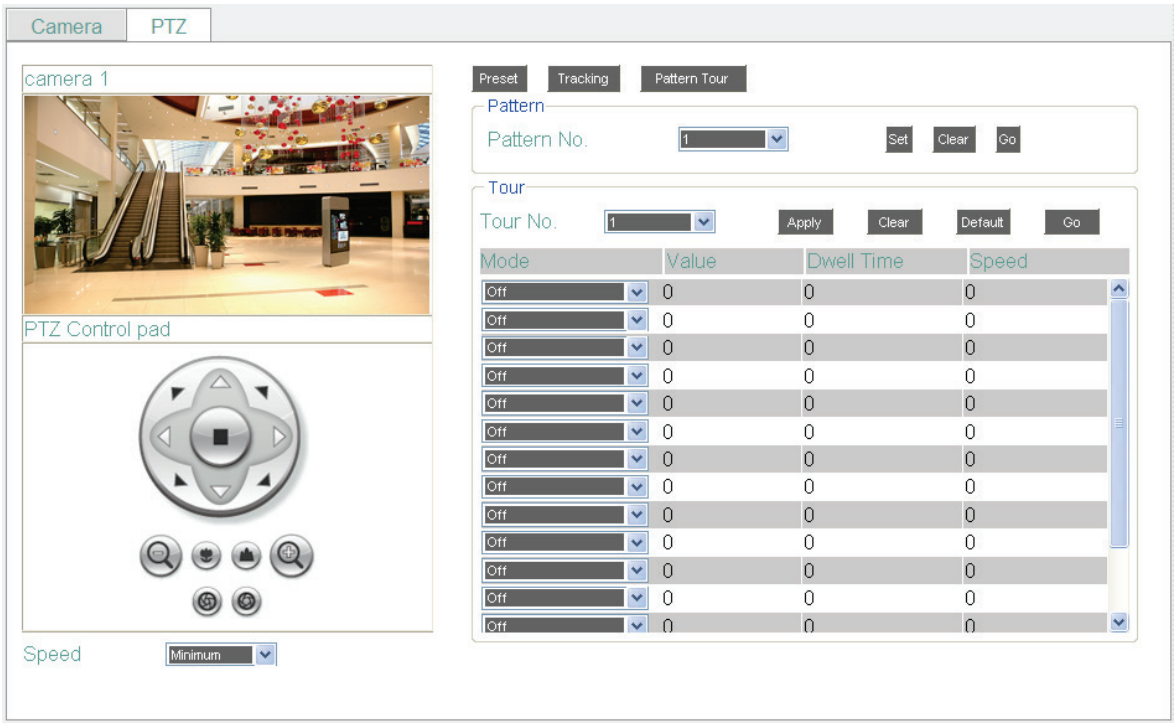


Figure 7-28

Pattern: You are given 90 seconds to move the camera (via the PTZ buttons) to different positions (and different zoom / focus / Iris positions). The camera then saves that sequence under the Pattern No. you've selected. Up to 4 Patterns can be configured.

To set up a Pattern Sequence:

5. Select a pan and tilt speed from the **Speed** drop-down list for the camera to move to the directions when you use the direction buttons during the configuration period.
6. Select a pattern number from the **Pattern No** drop-down list.
7. Click the **Set** button to start the 90-second configuration period. Use the direction / zoom / focus / Iris buttons to move the camera in the desired sequence.
8. Click the **Complete** button again to end the configuration.

Click **Clear** can void the configuration for the entered Pattern No. Click **Go** to view/test the configured Pattern sequence.

To activate the Pattern function on the PTZ Live View window, click the PTZ icon on the Menu Bar. Click the **Pattern** button, click on the numeric buttons to select a Pattern number and then click the **Go** button. The camera will move to the positions in the Pattern sequence you have configured. To stop the Pattern function, click the **Stop** button on the PTZ Control panel. Please refer to *7.6 PTZ* for detailed instructions.

Tour: You can combine up to 16 preconfigured camera positions and patterns into one long sequence. Up to 16 Tour sequences can be set up.

To set up a Pattern Sequence:

9. Select a number from the **Tour No** drop-down list.
10. To set up the first position for Tour No.1, select **OFF**, **Preset** or **Pattern** in the Mode field.

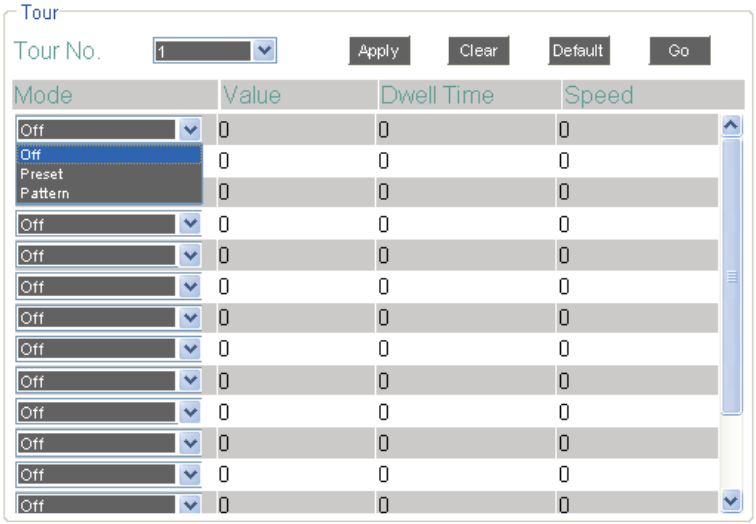


Figure 7-29

11. Enter a Preset No. or Pattern No. in the **Value** field.
12. Enter a dwell time (1~99 seconds) in the **Dwell Tour** field that the Tour will pause at a Preset position or after a Pattern sequence.
13. Enter a speed (1~255) at which the camera will move to the Preset position or first point of the Pattern sequence.
14. Follow Step 3 to 5 to configure up to 16 positions for Tour No.1.
15. To configure another Tour sequences, select a number from the **Tour No** drop-down list and follow Step 3 to 6 to configure up to 16 positions for the selected Tour number.
16. Click **Apply** to apply the settings. Click **Clear** to clear the current settings for the selected Tour No.; click **Default** to set the Tour Sequence to Default setting; click **Go** to view/test the configured Tour sequence.

To activate the Tour function on the PTZ Live View window, click the PTZ icon on the Menu Bar. Click the **Tour** button, click on the numeric buttons to select a Tour number and then click the **Go** button. The camera will move to the positions in a long sequence you have configured. To stop the Pattern function, click the **Stop** button on the PTZ Control panel. Please refer to *7.6 PTZ* for detailed instructions.

7.5.3 Video Adjust

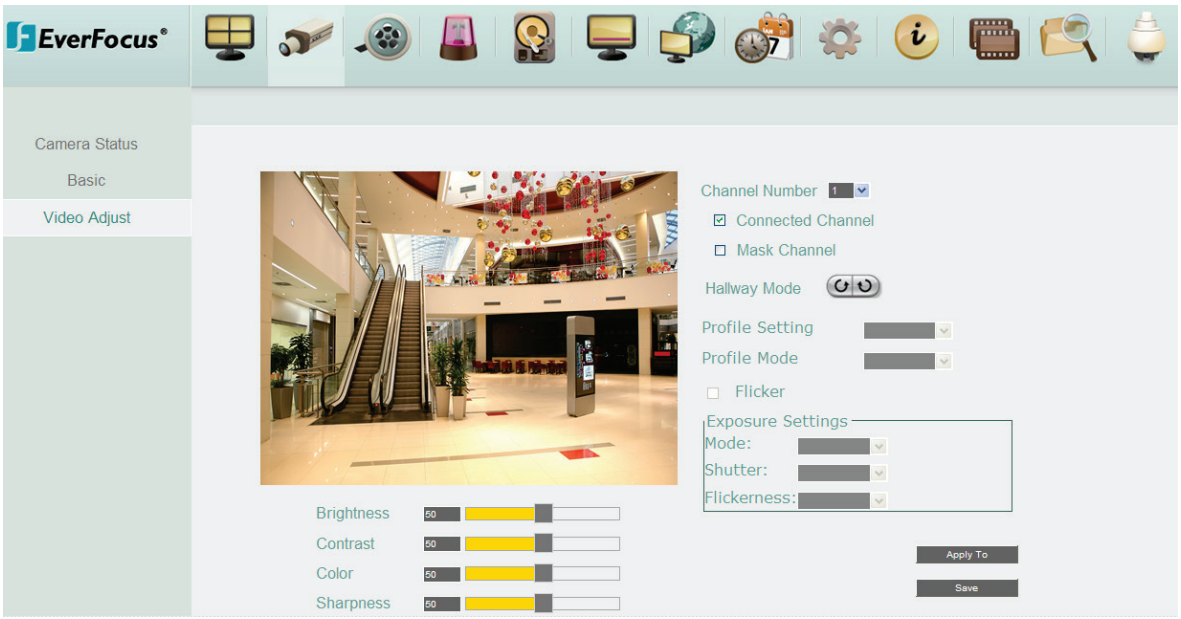


Figure 7-30

Channel Number: Select a channel to configure the following settings.

Connected Channel: Check the box to enable the connection between the camera and the NVR. If the box is unchecked, the system will disconnect the camera and stop recording.

Mask Channel: Check the box to mask the camera's live view on the screen, but the recording function is still on.

***Hallway Mode (9:16):** Click the **Rotate** button to rotate the live image. This function allows users to monitor vertically-oriented areas such as hallway, corridors and aisles. It's recommended to select a 16:9 View Size (e.g. 1920x1080 / 1024x768) to achieve the best display effect. ***Please see the note below.**

Note: The **Hallway Mode** option only appears when the selected camera is equipped with the Hallway Display function.

Note: Whether the following functions marked with a "*" will be enabled or not depends on the connected IP camera. If the IP camera doesn't have the any one of these functions, the function will not be enabled. The setting options will also vary according to the IP cameras you selected. For more details, please refer to your IP camera's user's manual.

* **Profile Setting:** Select **Day Mode** or **Night Mode.** It is designed for user to easily have a best image quality of the camera in the daytime and night time.

* **Profile Mode:** Select a desired profile mode (Vivid/High Contrast, Standard, More Detail and User Define) to adjust image quality.

* **Flicker:** Check the box to enable the Flicker function. Please enable this function only if flicker artifacts are observed.

* 【**Exposure Settings**】This setting is used to adapt to the amount or type of light used by the camera.

* **Mode:**
  - **ALC (Shutter Priority):** Selecting ALC (Automatic Light Control) allows the camera circuitry to either take bright spots more into consideration (peak), bringing out detail in bright areas, or less into consideration (average) bringing out detail in shadows.
  - **AES (Iris Priority):** Selecting AES (Auto Electronic Shutter) disables the Shutter setting below this setting. In this mode, the camera measures the light level and decides whether it needs more or less light and then automatically adjusts the shutter speed accordingly. You can further adjust the Iris (P-Iris) value.
  - **Auto:** Selecting Auto for the camera to automatically adjust the Iris and Shutter based on the measured light level.

* **Shutter:** If enabled, this setting lets you set the shutter speed yourself (measured in fractions of a second).

* **Flickerless:** The function is only activated if you select **Auto** in the Mode field. Choose between OFF, 50HZ, 60HZ, 50HZ (High Luminance) or 60HZ (High Luminance).

Brightness: Move the bar to adjust the brightness.

Contrast: Move the bar to adjust the contrast.

Color: Move the bar to adjust the color.

Sharpness: Move the bar to adjust the sharpness.

Apply To: Click the button to apply the same settings to the desired cameras.

Save: Click to save the settings.

7.6 PTZ

You can use the PTZ Control Panel to control the connected PTZ cameras, to set **Preset** setting and to activate the configured PTZ settings. You can also connect to an EverFocus' EKB200 keyboard to a computer to control the PTZ camera.

Figure 7-31

To control the PTZ camera:

1. Select a connected PTZ camera in the **Camera** drop-down list first.
2. To move the camera to the desired direction and angle, click the **Direction** buttons.
3. To zoom in / out the camera view, click the **Zoom** buttons.
4. To adjust the camera focus, click the **Focus** buttons.
5. To adjust the Iris open to increase / decrease the amount of light in, click the **Iris** buttons.
6. To program a Preset Position (if supported by the camera):
   a. Move the PTZ camera to the desired position.
   b. Click the **Preset** button.
   c. Set up a preset number for the current position by clicking the number buttons. The number will be displayed in the number box.
   d. Click the **Set** button to save the settings.

7. To jump to a Preset Position:
   a. Click the **Preset** button.
   b. Click the desired Preset number.
   c. Click the **Go** button.
8. Shortcut for Preset 1 ~ 9:
   a. Click digit 1 ~ 9 button without clicking any other buttons.
   b. The camera will seek that Preset Position.
9. To delete a Preset Position (if supported by the camera):
   a. Click the **Preset** button.
   b. Click the desired Preset number.
   c. Click the **Delete** button.
10. To operate the Auto Pan function, click the **Auto Pan** button.
11. To operate the Pattern function, click the **Pattern** button. The Pattern is the "0" Tour in EverFocus and Pelco PTZ cameras.
12. To operate the Tour function:
    a. Click the **Tour** button.
    b. Click the desired Tour number.
    c. Click the **Go** button.
13. To remove a pre-configured Tour (if supported by the camera):
    a. Click the **Tour** button.
    b. Click the desired Tour number.
    c. Click the **Delete** button.
14. To start the auto-tracking function, click the **Track** button.
15. To start tracking an object on the screen, click the **Object** button. When the object selection box displays on the screen, click to select an object to start auto tracking. Once the PTZ camera loses track of the object, the camera will return to the auto tracking start point. Please select forward position in the object movement path to get better tracking result.

Click **C** to clear the entered number in the Number Box.

Note: Before start using the Auto Pan, Pattern, Tour, Tracking and Object functions, you have to configure the related settings for the connected PTZ cameras. Please refer to *7.5.2.2 PTZ* or the User's Manual of your PTZ cameras.

Control PTZ Camera over EKB200 Keyboard:

When using an EKB200 keyboard, you need to click the **Connect** button on the PTZ Control Panel. Please note that you need to configure the PTZ control functions and define the function for each control key on the keyboard before controlling the PTZ camera over the EKB200 keyboard (see *7.5.2.2 PTZ* and *6.8.6 EKB200*). For information about the installation of the EKB200 keyboard, please refer to your EKB200 keyboard User's Manual.

Chapter
8

8. Specifications

8.1 ENVR8304D-8CH / ENVR8304D-8CH

Model Name	ENVR8304D-8CH / ENVR8304E-8CH
System	
Operating System	Embedded Linux
Number of Channels	8 CH
RAM	2 GB
Dual Streams	Yes
DVD Build-in Burner	N/A
System Control	Mouse, Web UI, IR Remote Control
OSD Menu	Yes
Video	
Compression Format	H.264
Video Output	VGA / HDMI
Recording	
Recording Frame Rate / Resolution	Up to 5 megapixel resolution 240 NTSC / 200 PAL fps at 1080p 240 NTSC / 200 PAL fps at 720p 240 NTSC / 200 PAL fps at D1 240 NTSC / 200 PAL fps at CIF MAX: 30 fps at 1080p/CH (Depend on IP Camera)
Recording Mode	Manual, Schedule and Event
Recording Performance	56 Mbps
Playback	
Playback Frame Rate / Resolution	Up to 5 megapixel resolution 240 NTSC / 200 PAL fps at 1080p 240 NTSC / 200 PAL fps at 720p 240 NTSC / 200 PAL fps at D1 240 NTSC / 200 PAL fps at CIF
Playback Search Mode	Date / Time Search, Event Search, Snapshot Search
Audio	
Audio Input / Output	1 x RCA / 1 x RCA (Line level)

Alarm	
Alarm Input / Output	2 / 2
Storage	
Internal 3.5” HDD	4 x SATA HDD (Max: 16 TB)
External Storage	1 x eSATA (optional:EDA450, Max: 8 TB)
RAID Level	RAID 5
Network	
Ethernet	2 x Gigabit Ethernet
Protocol	TCP-IP / DHCP / PPPoE / DDNS / UDP / SMTP / RTP / RTSP / NTP
Max. User Access	3 Levels of User Access Defined
Interface	
PoE Network (ENVR8304E only)	Build-in 8 Port 10/100 PoE (ENVR8304E only)
USB	4 x USB 2.0 port (2 ports on Front Panel, 2 ports on Rear Panel)
Ethernet	2 x RJ-45
VGA / HDMI	1 / 1
RS-232	9-pin D-sub socket
RS-485	3-pin terminal connector
General	
PTZ Protocols Supported	EverFocus, Pelco D, Pelco P, Samsung, Transparent
Power Input	100-240 VAC~
Power Consumption	150W max.
Operating Temperature	0°C~40°C / 32°F~104°F
Operating Humidity	20~80%
Dimensions (W x D x H)	430 mm x 423 mm x 72 mm / 16.93" x 16.65" x 3.13"
Weight	6.0 kg / 13.23 lbs (without HDDs)
Language	English, Japanese, Simplified / Traditional Chinese, Spanish, German, French, Russian, Portuguese (Brazil), Dutch
Regulatory	CE, FCC, UL
Remote Client System Minimum Requirement	
Operating System	Windows XP (32-bit) / Win7 (32 and 64-bit)
CPU	Intel Core 2 Duo, 2.6GHz
RAM	2GB
VGA	AGP or PCI-Express, 800x600 (1280x1024 recommended), 32-bit color
LAN Speed	10 / 100 / 1000 Mbps (RJ45)
Web Browser	Windows (IE 8, 9, 10, Chrome, Firefox, Safari), MAC (TBD)
Other Remote Application	1. EverFocus’ CMS: Power Video Plus (Windows AP) 2. EverFocus’ mobile app: MobileFocus for iOS and Android devices MobileFocusHD for iPad

8.2 NVR Smart Switch for ENVR8304D

Name		NVR Smart Switch
Ports		
Number of Ports		10 ports 8-port Fast Ethernet 10/100 BaseTX, IEEE 802.3 at PSE 2-port Gigabit Uplink (1*TP, 1*SFP)
Features		
Administrator Management		Web Management, Password Protection, Configuration Backup/Restore, Firmware Upgrade
IGMP Snooping		V1 & V2
LED Indicators		Per Port: Link/Act PoE Act/Status Power
Link Aggregation		1, Gigabit ports
Port Based VLAN		10
Port Management		Port State, Speed/Duplex, Flow Control Configuration, Port Mirroring, Bandwidth Control, Broadcast Storm Control, PoE
Quality of Service (QoS)		High & Low priority queues, 802.1p
Security		Port & MAC binding, 3 MAC per port
Tagged Based VLAN		32, VID = 1~4094
Performance		
Buffer Memory		2.75 M bits
Filtering / Forwarding Rates		10 Mbps port - 14,880 pps 100 Mbps port - 148,800 pps 1000 Mbps port - 1,488,000 pps
MAC Address		4 K
Transmission Media		10BaseT Cat. 3, 4, 5 UTP/STP 100BaseTX Cat. 5 UTP/STP 1000BaseT Cat. 5/5E, 6 UTP/STP
Transmission Method		Store and Forward
General		
PoE Power	**Input**	100-240 VAC~, 50 ~ 60 Hz
	Output	IEEE 802.3at Compliant Voltage, Per Port Max. 30 watts (8 Ports at Full 15.4 W / 4 Ports at Full 30 W)
Max. Power Consumption		130 W
Dimensions (H x W x D)		44 x 266 x 160 mm (1.73” x 10.47” x 6.3”)
Weight		1.8 kg (3.97 lb)
Operating Temperature		0°C ~ 45°C (32°F ~ 113°F)

Operating Humidity	10 to 90% RH (non-condensing)
Storage Temperature	-20°C ~ 90°C (-4°F ~ 194°F)
Standards	IEEE 802.3 10BaseT IEEE 802.3u 100BaseTX IEEE 802.ab 1000BaseT IEEE 802.3z 1000BaseSX/LX IEEE 802.3x Flow Control IEEE 802.3ad Link Aggregation Control Protocol IEEE 802.1Q VLAN IEEE 802.1p Class of Service IEEE 802.1D Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.3at Power Over Ethernet (PoE+)
Regulatory	CE, FCC Class A

8.3 Embedded PoE of ENVR8304E

Name	PoE
Ports	
Number of Ports	9 ports 8-port Fast Ethernet 10/100 BaseTX, IEEE 802.3 at PSE 1-port Gigabit Uplink (1*TP)
Features	
Administrator Management	Web Management, Password Protection, Configuration Backup/Restore, Firmware Upgrade
IGMP Snooping	V1 & V2
LED Indicators	Per Port: Link/Act PoE Act/Status Power
Link Aggregation	1, Gigabit ports
Port Based VLAN	9
Port Management	Port State, Speed/Duplex, Flow Control Configuration, Port Mirroring, Bandwidth Control, Broadcast Storm Control, PoE
Quality of Service (QoS)	High & Low priority queues, 802.1p
Security	Port & MAC binding, 3 MAC per port
Tagged Based VLAN	32, VID = 1~4094
Performance	
Buffer Memory	2.75 M bits
Filtering / Forwarding Rates	10 Mbps port - 14,880 pps 100 Mbps port - 148,800 pps 1000 Mbps port - 1,488,000 pps
MAC Address	4 K
Transmission Media	10BaseT Cat. 3, 4, 5 UTP/STP 100BaseTX Cat. 5 UTP/STP 1000BaseT Cat. 5/5E, 6 UTP/STP
Transmission Method	Store and Forward
General	
Standards	IEEE 802.3 10BaseT IEEE 802.3u 100BaseTX IEEE 802.ab 1000BaseT IEEE 802.3z 1000BaseSX/LX IEEE 802.3x Flow Control IEEE 802.3ad Link Aggregation Control Protocol IEEE 802.1Q VLAN IEEE 802.1p Class of Service

	IEEE 802.1D Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.3at Power Over Ethernet (PoE+)
Regulatory	CE, FCC Class A

Appendix

A

Appendix A: Network Overview

This chapter will give you a basic instruction on how to set up the NVR for network connection. It is highly recommended that you have a working knowledge of what a network is and how it works. This will be helpful in completing the networking process.

Introduction to TCP / IP

TCP/IP is the group of protocols used by the Internet and most Local Area Networks (LANs) throughout the world. In TCP/IP, every computer or other communications device that is connected to the network has a unique IP address. By doing this you are giving your device a unique address similar to the address of your house. An IP address is composed of four octets (numbers in the range of 0 to 255) separated by decimal points. The IP address is used to uniquely identify a host or computer on the LAN. For example, one computer on a network could have an IP address of 192.168.1.127.

You should never give two or more devices the same exact IP address, but the first three octets of an IP address is often the same for all computers in the local area network. For example, if a total of 253 computers exist in a single LAN, the IP addresses could be assigned starting with 192.168.1.x, where x represents a number in the range of 2 to 254. In IPP address could be compared with a telephone number.

Subnet Masks

Each host in a LAN has a subnet mask. The subnet mask is a set of octets that is used to determine which LAN or class it belongs to. The number 255 is usually used to represent the network address portion of the IP address and a zero is placed at the end to identify the host portion of the address. Basically the subnet mask tells the devices how the network addresses are organized, and helps to determine which addresses are local and which are remote (on the other side of the router).

Gateway Address

Addressees are either local or remote. A gateway address is composed of four octets separated by decimal points. The gateway address is used to uniquely identify the device on the LAN that has access to the communications links connecting to other LANs, WANs and/or the Internet (access to the 'remote' addresses).

Virtual Ports

A **port number** represents a "channel" or entryway for network communications. Port numbers allow different computers to utilize network resources without interfering with each other. Port numbers most commonly appear in network programming, particularly socket programming. Sometimes, though, port numbers are made visible to the casual user. For example, some websites on the Internet use a URL like the following:
http://www.sitename.com:8100/

In this example, the number 8100 refers to the port number used by the browser to connect to the web server. The standard port number used by web sites is 80, so this number does not need to be included with the URL (although it can be). In IP networking, port numbers can theoretically range from 0 to 65535. Most popular network applications, though, use port numbers at the lower end of the range (such as 80 for HTTP). Ports are similar to doors and windows of your house, with port 80 acting as the front door. If these are not open you could not enter the house. This is the same case with ports on a network. If the ports for a specific IP address are not open then you could not gain access to that IP address.

Note: The term port also refers to several other aspects of network technology. A port can refer to Ethernet connection points, such as those on a hub, switch, or router. The term port is also used to refer to a physical connection point for peripheral devices such as serial, parallel, and USB ports.

Another analogy would be: if a WAN IP address is similar to the phone number identify a site, IP ports are similar to telephone extensions, in that they allow communication with specific devices within a site that all share the same external (WAN) IP address. A router is a device which allows multiple computers and other IP enabled equipment to share that single WAN IP address. It functions like a "switchboard operator" – opening ports creates an association between those port numbers and the LAN IP address of specific equipment on the LAN behind the router. When the router sees a 'call' for a specific 'extension' (port), it directs that data stream to the (LAN IP address of the) equipment associated with that 'extension' (port).

Pre-Installation

Before beginning the installation, please answer the following questions:

- Do you have Hi-speed Internet? _____

  There are many types of high speed Internet available. The most common ones are T1, Cable, and DSL (in order of speed). The NVR is not compatible with a dial-up connection.

Note: EverFocus suggests having a minimum upload speed of 256KBps. This can be addressed by your Internet Service Provider.

- What type of modem/router do you have? _____
  Modem/router model name/ #

  The modem/router was either installed by your Internet service provider or purchased by you to establish a connection to the Internet. A router assigns different internal IP addresses to local computers; this allows multiple computers to access the Internet through the same external IP address.

- Do you have a static IP address? _____

  A Static IP address means you use the same IP address every time you connect to the Internet. With a static IP address, other Internet users always know the address of your location and can easily connect with it. This makes it much simpler to host a website, email server, or other type of server connection. EverFocus suggests using a static IP address. If this is not available, you will need to use a dynamic IP address. This is explained below.

- Do you have a dynamic IP address? _____

  A Dynamic IP address means your IP address changes each time you connect to the Internet. We recommend asking your Internet service provider for a Static IP address. If this is not a possibility, you may use the DDNS feature of the NVR. DDNS stands for Dynamic Domain Name Server, a service that provides a central database where IP information can be stored and retrieved. It allows those using a dynamic IP address to be registered centrally so users can connect to it by name. See *6.6.3 DDNS* for details on using EverFocus DDNS.

Pre-Installation

EverFocus' NVR can operate using one of three types of networking connections.

Simple One to One Connection: A simple one to one connection is the simplest type of network connection. It uses a cross-over cable to make a direct connection from one computer to another (or in this case a computer to a NVR).

Direct High Speed Modem Connection: A direct modem connection uses a standard network cable to connect the modem directly to a computer (or in this case a modem to the NVR). This type of connection only covers single-port modems. For a combination modem/router, use the setup described below.

Router or LAN Connection – A local area network connection requires either a router or a pre-existing LAN connection. This is the most common type of connection. A router allows multiple computers and NVR's to access each other as well as the Internet. It assigns different internal IP addresses to the computers.

Appendix

B

Appendix B: Linksys & D-Link Port Forwarding

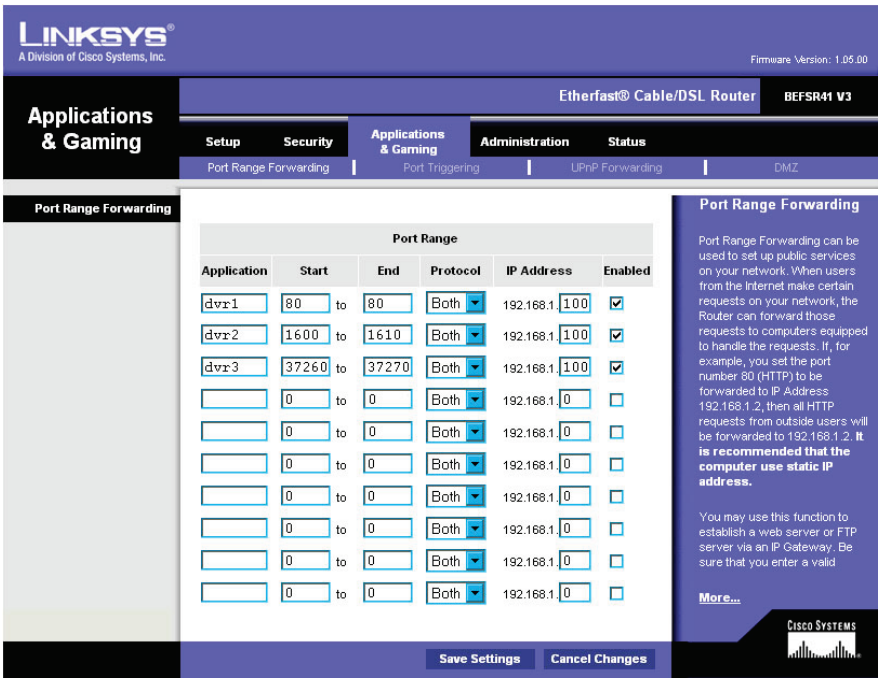
Typical Linksys Port Forwarding

This section will cover a few simple configurations for the Linksys router. This chapter is only to offer some help to the installer and end user. Please understand we **DO NOT** support this product and will not give tech support on it. If you need additional technical support on this router you must call Linksys.

To access the Web-based Utility, launch a web browser and type the Router's IP address, typically **192.168.1.1**, in the address bar. Then press Enter. A password request page will appear. (Non-Windows XP users will see a similar screen.) Leave the User Name field blank. The first time you access the router, use the default password **admin**. Click the **OK** button to continue.

The first screen that appears displays the Setup tab. This allows you to change the Router's general settings. Change these settings as described here and click the **Save Settings** button to apply your changes or **Cancel Changes** to cancel your changes.

Click on the “Applications & Gaming” tab.


LINKSYS
A Division of Cisco Systems, Inc.
Firmware Version: 1.05.00
Etherfast® Cable/DSL Router
BEFSR41 V3
Applications & Gaming
Setup
Security
Applications & Gaming
Administration
Status
Port Range Forwarding
Port Triggering
UPnP Forwarding
DMZ
Port Range Forwarding
Port Range
Application
Start
End
Protocol
IP Address
Enabled
dvr1 80 to 80 Both 192.168.1.100
dvr2 1600 to 1610 Both 192.168.1.100
dvr3 37260 to 37270 Both 192.168.1.100
Save Settings
Cancel Changes
Port Range Forwarding
Port Range Forwarding can be used to set up public services on your network. When users from the Internet make certain requests on your network, the Router can forward those requests to computers equipped to handle the requests. If, for example, you set the port number 80 (HTTP) to be forwarded to IP Address 192.168.1.2, then all HTTP requests from outside users will be forwarded to 192.168.1.2. It is recommended that the computer use static IP address.
You may use this function to establish a web server or FTP server via an IP Gateway. Be sure that you enter a valid
More...
Cisco Systems

Applications and Gaming allows you to set up public services on your network, such as web servers, ftp servers, e-mail servers, or other specialized Internet applications. (Some Internet applications may not require any forwarding) To forward a port, enter the information on each line for the criteria required. Descriptions of each criterion are described here.

Application - In this field, enter the name you wish to give the application.
Start/End - Enter the starting number of the range under **Start** and the ending number under **End**.
Protocol - Enter the protocol used for this application, either **TCP** or **UDP**, or **Both**.
IP Address - For each application, enter the IP Address of the PC running the specific application.
Enable - Click the **Enable** checkbox to enable port forwarding for the relevant application.
When finished making changes, click the **Save Settings** button to apply your changes or **Cancel Changes** to cancel them.

Here is an example for how the port information might look:

HTTP 80 to 80 Both 192.168.1.50 Enable

Where 192.168.1.50 is the IP address of the NVR on the LAN, and the default port 80 is in use.

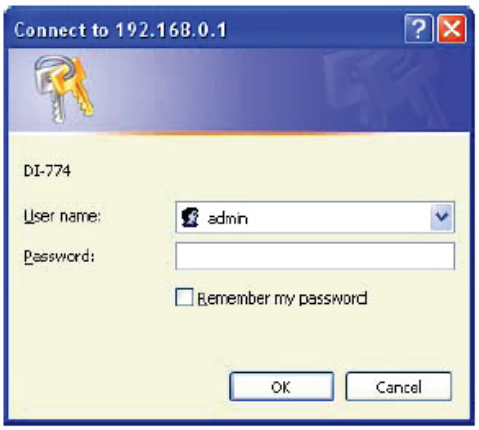
Note: ***If you changed port 80 in the NVR’s Network Menu, open that port instead of 80.***

Typical D-Link Port Forwarding

This section will cover a few simple configurations for the D-Link router. This chapter is only to offer some help to the installer and end user. Please understand we **DO NOT** support this product and will not give tech support on it. If you need additional technical support on this router you must call D-Link.

Whenever you want to configure your network or the DI-624, you can access the Configuration Menu by opening a web-browser and typing in the IP Address of the DI-264.
The DI-264 default IP Address is 192.168.0.1.

- Type “admin” in the **User Name** field
- Leave the **Password** blank
- Click **OK**



The first screen that shows up is the Home Tab. This is the starting point for all the router’s settings and functions.

Click Virtual Servers on the left to bring up the following screen.

Virtual Servers allows users who are connecting remotely to access services on the router's Local Network. The functions of each field are described below.

Virtual Server - Select **Enabled** or **Disabled**
Name - Enter the name referencing the virtual service
Private IP - The IP address of the device running the local services.
Protocol Type - The protocol used for the virtual service.
Private Port – The port number that the service uses on the LAN (Local Area Network).
Public Port - The port number that the services uses on the WAN (Wide Area Network).
Schedule – The time period the virtual server will be active.
When you have input all the information for a virtual server, click on **Apply** to add it to the list at the bottom or **Cancel** to clear all fields.
Here is an example of the information for each service:

Name	Private IP	Protocol	Private Port	Public Port	Schedule
HTTP	192.168.1.50	Both	80	80	Enable

Where 192.168.1.50 is the IP address of the NVR on the LAN, and the default port 80 is in use.

Note: ***If you changed port 80 in the NVR's Network Menu, open that port instead of 80.***

Appendix

C

Appendix C: IR Remote Control

The IR remote control is an accessory to enhance the convenient operation of the NVR. You can perform all the settings and operations from the remote control. The effective distance is up to 33 feet line of sight.

ID number here must correspond to the "IR Remote ID" set up in the "I/O Control Menu".

The buttons are used to select a DVR when there is more than one DVR installed in the same environment. Selecting an incorrect DVR ID will prevent the DVR from responding to commands from the Remote Control.

Channel keys #1~8

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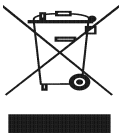

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